



TRACKING THE STEEL DRAGON

How China's economic policies and the railway are transforming Tibet

A report by the International Campaign for Tibet
Washington, DC | Amsterdam | Berlin | Brussels
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The front cover image, 'Train to Tibet #1' by Washington, DC-based Tibetan artist Losang Gyatso, depicts the ancient Kyung bird, which is traditionally depicted as a serpent-killer, and a significant symbol from the ancient Bon (pre-Buddhist) tradition in Tibet. In the painting, it is symbolic of the Tibetan space through which the train moves. Gyatso says: "The passengers in the train don't know what's in front of them or behind them, but only what they see out of the window." www.gyatsostudio.com

The image on the back cover depicts the Tibetan plateau taken from space. Tibet is often referred to as the 'roof of the world' or the 'world's third pole' because it contains the largest ice fields outside of the Arctic and Antarctic. It is now threatened by melting glaciers and other extreme weather phenomena. This image vividly shows how this is likely to affect the lives of millions of people in Asia as well as those on the plateau – Tibet is the source of many of Asia's major rivers, flowing into India and China. IMAGE COURTESY OF NASA/GODDARD SPACE FLIGHT CENTER, SCIENTIFIC VISUALIZATION STUDIO, svs.gsfc.nasa.gov/goto?2356

Acknowledgements

We are indebted to a number of individuals who contributed original material, information and advice, and without whom this report would not have been possible. Due to the political environment in Tibet and the restrictions placed on information gathering and the expression of views, it is not possible to name many of our sources and advisors. In addition, in some places in the report, ICT has deliberately changed names and other information which could be used to identify sources. Even though their names are not listed here, ICT wishes to acknowledge their invaluable contributions and their generosity — in particular, some Tibetan friends for sharing their in-depth knowledge and understanding of the current situation on the plateau — their insights were invaluable. A special thanks to our Tibetan field team in India and Nepal for their dedication under often difficult circumstances, determination and high quality research.

This report was written in-house at ICT's DC office and indispensable groundwork was laid by Gabriel Lafitte in the provision of sources, analysis, and notably, original material for the section on environmental impacts of the railroad. We are immensely grateful to Gabriel for his research, writing, and attention to detail. For their invaluable comments on drafts of the report and provision of material, we'd like to thank the following: Andrew Clark, Susette Cooke, Steven D. Marshall, Andrew Fischer, Emily Yeh, Pankaj Mishra, Jane Caple, David Guest, a friend in Nepal, Amanda Noonan and Susan Chen. Tashi D. Lek provided the images of Tibet from space and essential source material. For their unstinting work, unearthing of obscure and other sources and fine prose, Jigme Page, Dawa Bowie, Merlot Spice and Rubicon Spice and for tech support, Roy the Magician. Thank you also to Tashi Rabgey, Adam Koziel and Claire Scobie, and to a solitary winter traveler as well as Robert Barnett and Zoeann Murphy for images of the plateau. We are grateful to artist Losang Gyatso for allowing us to use his painting, *Train to Tibet (1)*, on the cover, and to Michelle Kleisath, for her book, *'Heavy Earth, Golden Sky: Tibetan women speak about their lives'* — essential reading for anyone interested in the realities of life in Tibet today. Thanks also to our designer, Bill Whitehead, who is always graceful and charming to work with.

Many people help us, and our field teams, behind the scenes. Here is a final comment from one of them, in Dharamsala, India, on watching Tibetan children, newly arrived in exile, playing video games and chatting to their parents in Tibet online: "I watch them and know that there is hope the other side of the mountains, and the skills and spirit to make things happen when the time comes."

Note on geographical terms

Tibet was traditionally comprised of three main regions: Amdo (northeastern Tibet), Kham (eastern Tibet) and U-Tsang (central and western Tibet). The Tibet Autonomous Region (Chinese: Xizang zizhiqu) was established by the Chinese government in 1965 and covers the area of Tibet west of the Yangtse River (Tibetan: Driчу), including part of Kham, although it is often referred to now as 'central Tibet' in English. The rest of Amdo and Kham have been incorporated into Chinese provinces, and where Tibetan communities were said to have 'compact inhabitancy' in these provinces, they were designated as Tibetan Autonomous Prefectures and Tibetan Autonomous Counties. As a result, most of Qinghai and parts of Gansu, Sichuan and Yunnan Provinces are designated by the Chinese authorities as 'Tibetan'. The term 'Tibet' in this report is used to refer to all of these Tibetan areas designated by the PRC as 'autonomous'.

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EXECUTIVE SUMMARY

THE WORLD'S HIGHEST RAILROAD across the Tibetan plateau to Lhasa (completed in July 2006) is the most high-profile symbol of Beijing's ambitious plans to develop the western regions of the People's Republic of China (PRC). As an indispensable element of Beijing's 'transportation revolution', the aim of its construction is to expand the influence and consolidate the control of the Chinese Communist Party (CCP), which regards this as crucial to China's successful rise in the 21st century.

This report documents the immediate impact of the railroad from Golmud in Qinghai to Lhasa in the context of China's strategic and economic objectives and shows that Beijing's policies on the plateau are:

- Leading to a 'second invasion' of Tibet by accelerating the influx of Chinese people;
- Causing the further exclusion of Tibetans from economic activity — which even Chinese analysts believe risks provoking the very despair and opposition feared by the Chinese state in its quest for 'political stability';
- Damaging Tibet's fragile high-altitude environment, with disturbing implications for millions of people in the entire Asian region;
- Threatening the extinction of one of the last examples of sustainable pastoralism on earth;
- Heightening military readiness on the Tibetan plateau through the expansion of Chinese influence and construction of civil and military transport links, causing concern in neighboring India linked to disputed territory issues in the border areas between the two Asian giants;
- Causing concern for the survival of Tibet's culture and religion, which is integral to Tibetan identity and important not only to Tibet, but also to China and the wider world.

This report presents an alternative. It argues that only a re-orientation of economic strategy towards local integration — in effect, 'Tibetanizing' development — and the participation of Tibetans in decision-making in their economy could reverse the trend of marginalization and estrangement, and ultimately benefit the entire Asian region.

China's twin-track agenda in Tibet

The construction of the railroad to Lhasa reveals Beijing's political and strategic objectives in controlling Tibet. The US \$4.1 billion rail link connects Lhasa with the rest of the PRC, bringing Beijing much closer to the goal set by Mao Zedong over 40 years ago of integrating Tibet with China. It has been described as a 'quantum leap' in Beijing's strategy to develop its western regions, which is one of the major dynamics of contemporary China.

'Tracking the Steel Dragon' details the strategic significance to China of the extension of its national rail network into central Tibet, which Beijing describes as 'the southwestern frontier of the motherland', and the projected expansion of the line within Tibetan areas of the PRC and to Nepal. The Chinese government has recently acknowledged the military applications of the railway for the first time.

The railway is the linchpin of official plans to begin large-scale exploitation of Tibet's mineral and other natural resources under China's 'Western Development Strategy'. It has changed the dynamic of investment, drawing foreign corporations to enter the Tibetan economy for the first time. The large-scale extraction of these resources is a key element of the authorities' motivation for building the railroad, together with strengthening the state's authority and control over Tibetan areas.

But even Chinese scholars and policy-makers are questioning the basis of current development policies for Tibet, pointing out that migration and profit extraction from outside, on this scale, are neither beneficial nor sustainable. This report concludes that:

- The model of economic development that China is pursuing in Tibetan areas, based on resource exploitation and infrastructure construction, is increasing, rather than decreasing, Tibet's dependence on subsidies from the central government.
- Despite years of investment under the Western Development Strategy, the vast majority of Tibetans are severely disadvantaged both socially and economically by the inadequate provision of education. According to official Chinese statistics, close to half of the population of the Tibet Autonomous Region (TAR) is illiterate, and the gulf between the educated elite and the urban and rural poor has widened further since the railroad opened.
- Tibetans themselves have no say in formulating economic policies for their own land and economy, and neither initiated nor directed the planning of the railroad.

Although the railroad will bring economic growth to Tibet, the wealth it generates will be concentrated in urban areas and resource extraction centers, and therefore the main beneficiaries will be Chinese.

- Tibetans lack access to vocational training which could prepare them to compete with the influx of workers from the Chinese interior who are flooding Tibet in search of work and opportunity, encouraged by official policies and the opening of the railroad.

The number of tourists to Tibet in 2007 hit a record high of 4 million following the arrival of the railway — nearly double the population of the TAR. While the Chinese authorities are marketing Tibet as a tourist destination based on the 'exotic' and spiritual attractions of its Buddhist culture and landscape, Beijing has tightened its control over Tibetan religious expression and practice and harsh political repression prevents Tibetans from speaking openly about their lives and culture. The involvement, rather than the exclusion, of Tibetans in appropriate forms of cultural/ eco-tourism could protect their culture as well as benefiting the economy.

How China's development policies on the Tibetan plateau impact millions in Asia

The implications of China's policies in Tibet go beyond the plateau. Scientists believe that the Tibetan plateau offers early warnings of global climate change, and because Tibet is the source of several of the world's largest rivers and plays a prominent role in the Asian monsoon system, accelerated warming there affects the lives of hundreds of millions of people downstream as well as those on the plateau itself. Scientists judge that increased urbanization and the Qinghai-Tibet railroad could be accelerating the warming process.

There is also concern in countries downstream, notably India, about the impact of China's rapid development policies, especially the proposals for dams and water diversion projects on the plateau.

More than 80% of Tibetans live in rural areas, and the majority have sustained themselves through a nomadic herder lifestyle, uniquely adapted to the harsh conditions and fragile ecosystem of the Tibetan plateau. But the implementation of Chinese policies to settle Tibetan nomads, and to resettle Tibetans in towns, is now threatening the livelihoods of hundreds of thousands of people and imperilling the Tibetan landscape.

This report reveals how these policies, based on an urban industrial model and imposed from the top-down in Beijing, are counterproductive: they have made nomads poorer and degraded Tibet's vast grasslands. Scientific research has established that the mobility of the herds keeps the grasslands healthy, that taking nomads off the land does not help conserve water resources, and that herdspeople denied their livelihood become demoralized and dependent. One of the last examples of sustainable nomadic pastoralism on this planet faces extinction unless this policy is soon changed.

There is a striking discrepancy between official admissions of the environmental crisis in the PRC, and the apparent refusal by the Chinese government to accept that this has any implications for development strategy in Tibet — an indication that Beijing's policy on Tibet remains exempt from genuine debate or enquiry.

A way ahead

The present drive to integrate Tibet into the Chinese and regional economies without fostering Tibet's comparative advantages in traditional agriculture or animal products presents a bleak prospect for the people who live there. Tibetans are being deprived of the stewardship of their land at a time when preserving the environment of the high plateau, recognized as both a barometer of and a key input to global climate change, has never been so critical to the rest of Asia and the world.

'Tracking the Steel Dragon' brings together the views and experiences of Tibetans, academic experts, and data gathered from the field — despite the increasingly oppressive political climate in Tibet — to present a compelling case for a proactive, affirmative and preferential policy towards Tibetans. Such a policy would apply in particular to the rural and urban poor, encompassing education, training, employment and business, judiciously combined with a locally-oriented development of infrastructure and services.

By continuing to pursue a model of development that appears to increase rather than close the gap between urban and rural, rich and poor, Chinese and Tibetan, the Chinese state risks further marginalizing and alienating the Tibetan people, potentially undermining the political objectives of its current development: a stable Tibet within China.



Tibet from space. The Himalayan Range looking from east to west with Tibet on the right. Nam Tso Lake is visible on the lower right of the image. Image courtesy of NASA, taken on December 4, 1988. PHOTO ID NO. STS027-151-80.



Most passengers on the railroad from Golmud and beyond traveling to Lhasa are Chinese migrants, settlers and tourists. This image depicts a group of passengers getting ready to board the train at the Nagchu (Chinese: Naqu) station on their way to Xining. (July 2007.)

IMAGE: ICT.

A GOLDEN PATH TO PROSPERITY?

The political and economic significance of the 'Sky Train'

*"The Qinghai-Tibet railway has epoch-making significance. There are some people who make irresponsible remarks, but we Chinese people, any Chinese person with any knowledge can raise their thumbs and say with justice on their side, this is an economic line, an environmental line, a line of unity and a line of prosperity, and it is a shining golden path quickly leading the people of Tibet and Qinghai towards a beautiful future."*¹

— Zhang Qingli, Tibet Autonomous Region Party Secretary

*"The land is being taken from under our feet"*²

— Tibetan nomad now in exile

THE CONSTRUCTION OF THE HIGHEST RAILROAD in the world across the Tibetan plateau, completed in July 2006, has had a dramatic impact on the lives of Tibetans and on the land itself. As the 'centerpiece' and most visible symbol of Beijing's plan to develop the western regions of the People's Republic of China (PRC), the railroad is accelerating the influx of Chinese people to the plateau, exacerbating the economic marginalization of Tibetans, and threatening Tibet's fragile high-altitude environment.³

The railroad is an indispensable element of Beijing's 'transportation revolution', aimed at expanding the Party's influence and consolidating its control through the construction of new and modern transportation links on the plateau and beyond. The 'opening up' of the western regions of the PRC is regarded by the Chinese Communist Party (CCP) as crucial to China's successful rise in the 21st century.

The railroad will enable the large-scale exploitation of Tibet's mineral and natural resources, and has triggered the involvement of foreign corporations in the Tibetan economy for the first time. Together with strengthening the state's command and control over Tibetan areas, extraction of these resources is a primary motive for building the railroad.

The construction of the 1142 km railroad from Golmud (Chinese: Ge'ermu) in Qinghai Province to Lhasa in the Tibet Autonomous Region (TAR) — completed despite immense technological challenges and a several billion dollar price tag — is a key indicator of Beijing's political and strategic objectives in Tibet.

The US \$4.1 billion rail link⁴ connects Lhasa with Beijing, Shanghai, Chengdu and Guangzhou via Xining, bringing Beijing much closer to achieving the goal set by Mao Zedong over 40 years ago to integrate Tibet with China. The line also has the potential to increase China's economic presence in South Asia by linking Tibet's economy more closely to China's east coast industrial and population centers, and strengthening Chinese transport links with the southern Himalayas, as well as opening the possibility of rail connections between China and South Asia. It has been described as a “quantum leap in China's western-oriented transportation infrastructure”.⁵ TAR Party Secretary Zhang Qingli noted the significance of the railroad to the highest levels of the Chinese leadership when he said: “In particular, the railway was built with the concern of the central Party with Hu Jintao as the General [Party] Secretary.”⁶

Official discourse emphasizes the heroic conquest of nature, making the construction of the railroad a feat comparable to China's conquest of space, China's stake in Antarctica, and the staging of the 2008 Summer Olympics in Beijing. In documentaries, books, stamps and calligraphic inscriptions by central leaders, the conquest of the Tibetan plateau by rail has been promoted as one of China's proofs of greatness. The celebration recalls the 1950s when the first roads penetrating the Tibetan ‘wasteland’ were first cut through the mountains.⁷

In an assertion typical of the official coverage of the railroad's opening, Chinese commentator Zong Gang enthused: “This railroad has been the dream of the Chinese nation for a hundred years. [Its construction] was China's landmark decision for the new century, and it definitely excited all ethnic peoples in China including the ethnic Tibetans.”⁸

Despite official rhetoric, the sustainability of the railroad on the shifting ground of the high plateau is uncertain. The geological and geographical conditions of the high plateau have not only made the railroad very expensive to build but could bring it to a halt within 10 years. Approximately half of the railroad had to be built on permafrost, or frozen earth, using pioneering new engineering methods to do so, and as early as August 2006 — just a month after the line had gone into operation — the authorities made a rare admission that fractures had started to appear in some railroad bridges because of permafrost movements under the rail bed.⁹ Statements in the English-language Chinese media have warned that rising temperatures on the Qinghai-Tibet plateau are likely to melt the permafrost enough to render the ground unstable, threatening the viability of the railroad in just a decade's time. It was reported in July 2007 that the Tibetan plateau is warming twice as fast as the rest of the world, and therefore offers a critical barometer for climate change on earth. (See ‘The world's ‘third pole’ — climate change and development in Tibet’, p. 231.)

Even so, the CCP's breathless prose on the railroad — described variously as the 'Sky Train', 'the line of unity', and 'the line to wealth' — continues unabated. To convince Tibetans of the positive benefits of the railroad, the authorities even brought in 'artistic troupes', and in areas close to key stations, organized lectures that local people are required to attend that "raise the masses' awareness of participating in the railroad's safety and of their responsibilities, and creating with all of one's strength a good atmosphere of 'praising the railroad, protecting the railroad, loving the railroad.'"¹⁰

The propaganda is accompanied by warnings to Tibetans which are not publicized in the state media. Tibetans in some areas were presented with an official handbook giving a code of conduct for treatment of the railway line, and informed that by local officials that there would be punishments as severe as execution for those who violated the code if caught tampering with the tracks.¹¹ These warnings, and the support for the railroad at the highest levels of the Party, have intensified the climate of fear with regard to speaking openly about such issues in Tibetan areas.

On the ground, research into the railroad's impact is either forbidden or tightly constrained, and genuine debate on the impact of China's economic policies is not possible in Tibet. Even the concerns of Chinese scientists who question the sustainability and safety of a railroad built on shifting permafrost have failed to influence China's leaders, whose overriding concerns continue to be economic development and political stability.

A Tibetan who now lives in exile in America and who visited Lhasa at the time of the opening of the railway told ICT: "There is a realization that to speak out on this issue would be seen as expressing 'separatist' thoughts, and it is therefore very dangerous to talk about this issue with people one does not know and trust."

China has also stepped up its promotion of the railroad to Western governments and the international media as a marker of progress in Tibet. The official press is already describing development in Tibet as a 'rail economy', emphasizing the possibilities created by this connection to the Chinese hinterland.¹²

In reality, the massive investment being poured into Tibet is focused, at the state's command, on the construction of long-haul infrastructure. This infrastructure is of benefit chiefly to extractive industries and the administrative and military apparatus of the Chinese state in Tibet.

China's strategy to develop the western regions

The impact of the railroad on Tibet can only be understood in the context of the (CCP's) ambitious and transformative campaign of *Xibu da kaifa*, the strategy to develop the western regions of the PRC. The Chinese term *kaifa* in this context is often rendered into English as 'development'; however, standard dictionaries define *kaifa* as 'develop', 'open up' and 'exploit', which reflects how the Party perceives the western areas of the PRC — essentially as providers of resources in order to facilitate development in the central and eastern regions.¹³ China's leaders hope that the PRC's western region's resources can help to satisfy the nation's rising demand for water, minerals and energy.

Xibu da kaifa is a high-profile political campaign, initiated by the then Chinese President and CCP Chairman Jiang Zemin in 1999–2000, and intended to address economic, regional, ecological, and security concerns. As one of the major dynamics of contemporary China, it is an enormous undertaking, affecting more than 70% of the PRC's land area and almost a quarter of its vast population, including Tibetans, Uyghur Muslims and other 'national minorities'. The drive is not restricted to the 10 western provinces of the PRC but includes underdeveloped provinces with large ethnic populations in other regions, especially Inner Mongolia and Guangxi.¹⁴

The integration of Tibetan areas into China and exploitation of the natural resources of the Tibetan plateau have been priorities since the foundation of the PRC, and the Western Development Strategy represents an acceleration of this process.

In the 1950s, the Soviet Union helped China build state factories in the region, and in the 1960s Mao Zedong announced plans to develop heavy industry in the PRC's central and western regions. In the 1980s, Deng Xiaoping focused his market reform policy on the east coast — and urged the western regions to be patient, saying their time would come.

Jiang Zemin, perhaps concerned to secure his place in history alongside his influential predecessors, launched the campaign to develop the west with great fanfare in June 1999. The Western Development Strategy has been heralded by the Chinese leadership variously as 'epoch-making', 'a chance in a lifetime' and a 'once-in-a-millennium opportunity'.

The Western Development Strategy bears analogy with the opening of the North American west in the second half of the 19th century. "China's ability to apply modern

transportation technology [...] is one important and little studied aspect of its much-remarked 'rise'," says noted Asia scholar John W. Garver. "First China now has the fiscal wherewithal to invest heavily in the technological subjugation of these distances [...] In this sense, these networks are a manifestation of China's economic rise. A second dimension is that these new lines of transportation will be bearers of China's influence. Railways and better roads will bring Chinese goods, businessmen and businesses, investment, and cultural influences. Trade flows and inter-dependencies will develop. Chinese manufactured goods will occupy a growing market share, while distant natural resources will increasingly be plugged into China's industry [...]. China's influence will increase, in regions where it was historically limited by the tyranny of distance and terrain."¹⁵

An unsustainable model of development?

The model of economic development that China is pursuing in Tibetan areas, based on resource exploitation and infrastructure construction, is increasing, rather than decreasing, Tibet's dependence on subsidies from the central government, especially in the TAR.¹⁶

Chinese economists Hu Angang and Wen Jun have concluded that on the basis of results achieved so far, this model of development, at least as far as it is applied to the TAR, is of "unsustainably low economic benefit". The economists state that each time an industrial enterprise makes a loss of one unit, this loss is compensated by the central government 2.14 times over that value — each loss of 100 *yuan* (US \$12) results in subsidies of 214 *yuan* (US \$26). By contrast, when an industrial enterprise increases its output by one unit, it receives compensation of 2.89 times. This means that enterprises are receiving greater subsidies when output increases than when they are making a loss.¹⁷

Other Chinese analysts have criticized the current form of infrastructural, GDP-oriented, ultra-rapid growth in the western regions, pointing out that it is potentially dangerous, probably unsustainable, likely to damage local resources and environment, and encourages outside migration and profit extraction. The Western Development Strategy has been imposed from the top down in Beijing, with scant regard for local needs, views and livelihoods.

Referring to official GDP figures, development economist Andrew Fischer, who specializes in Tibet, notes that the largest tertiary category in the TAR (in terms of both

share and contribution to growth in the years 2000 and 2001) was 'government agencies, CCP agencies and social organizations' — the administrative apparatus of the state. (Statistics after 2004 were unavailable when the research cited here was conducted.) In the initial years of the Western Development Strategy, the expansion of government and CCP administration had become 'the engine of growth' in the TAR, representing fully 49% of GDP growth in 2000. Growth generated through the expansion of government administration is not self-sustaining, according to Fischer's analysis, and requires further revenues in order to be maintained.¹⁸

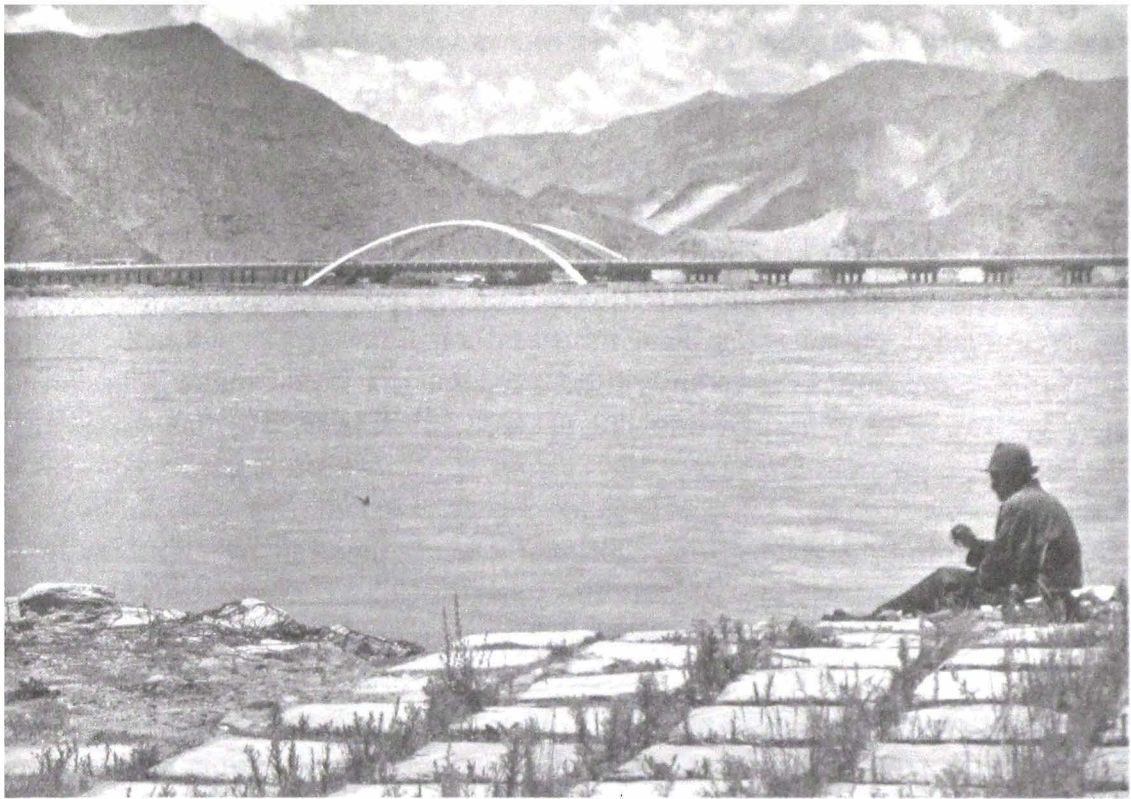
While China has moved more people out of poverty than any other country in recent decades, there is persistent destitution throughout the PRC,¹⁹ and high levels of poverty in Tibetan areas. Rural-urban inequality in Tibetan areas rose to be the highest in the entire PRC by 2003 or 2004.²⁰ The total disposable income of Tibetan farmers and nomads is considerably less than half of the average income for China's peasants.²¹

Beijing's plans for exploitation of resources and the railroad

The railroad provides the infrastructure to facilitate the increased exploitation of Tibet's natural resources by the Chinese state and Chinese companies, as outlined in Beijing's comprehensive plans to develop the western regions. Extraction of these resources is a primary motive for building the railroad and rests upon the state's absolute claim of ownership over Tibetan areas. Article Nine of China's Constitution dictates that every nugget of gold mined, every lump of coal and every tree in Tibet's forests belongs to the PRC.²²

Previously, natural resource extraction in Tibet was limited by various factors, including Tibet's remoteness, poor infrastructure and resulting lack of interest by foreign investors. "The great resources of Xizang, 'The Western Treasure House' [China's name for Tibet], were there; their exploitation remained elusive," writes John Avedon, referring to the years after China's takeover of Tibet in 1949–50 and prior to economic opening up. "In three decades, China had been able to obtain only what it could take with little effort — the rich skim of wealth coating the barrier of permafrost protecting the even greater treasure below; liquid currency from centuries of accumulated wealth in Tibet's monasteries; lumber from Kham; livestock from Amdo. No matter how badly the PRC coveted the vast mineral reserves of the plateau, its new leaders had to ask themselves when and how would they ever obtain it."²³

It is only now with the coming of the railroad that industrialization is properly beginning, with the beginning of large-scale mining and the often controversial



The design of the new Ne'u (Chinese: Liuwu) bridge over the sacred Kyichu River in Lhasa is intended to resemble Tibetan *khatags* (white offering scarves). (July 2007.) IMAGE: ICT.

involvement of foreign companies.

The extension of the rail line to Lhasa, the sharp and prolonged rise in price of the major metals found in Tibet, China's difficulties in sourcing sufficient supplies overseas, and the gradual inland shift of heavy industry are all driving intensified mineral exploitation in Tibet.

The Environment and Development Desk at the Tibetan Government in Exile (TGiE) has stated: "The technology of extraction, and partnership with foreign capital and expertise, are [similarly] new. This is an unprecedented situation, brought about by a confluence of profitability, technology, foreign direct investment and China's access to the Tibetan plateau. This new situation also presents a number of challenges that have to be addressed, otherwise both the environment and the local population will once again suffer."²⁴

In February, 2007, the official press announced that the Tibetan plateau has reserves of several billion tonnes of iron ore, 30–40 million tonnes of copper, plus 40 million tonnes of lead and zinc.²⁵ The findings, which located more than 600 sites for potential new mines, arose from a major geological survey of the Tibetan plateau, involving 1000 staff over a seven-year period. The survey covered only half of the plateau, due to the harsh conditions at altitude, so it is likely that the authorities believe there is still

further potential for the exploitation of mineral reserves. China is primarily interested in Tibet's reserves of gold, iron, chromite and copper. Uranium, an important material for nuclear development, is also being mined, although the sites are not made public. The Chinese authorities also recently announced that jade from Qinghai, found in an area close to the beginning of the rail link to Lhasa, would be used to make medals for the Beijing Olympics in August 2008.²⁶

“Once the mines are developed, they will greatly relieve the strain on China's existing resources,” said Zhang Hongtao, deputy director of the China Geological Survey, which carried out the investigation.²⁷

In 2005 and 2006, China's insatiable demand for almost all raw materials including minerals, oil, coal and agricultural commodities was in large part responsible for driving up prices worldwide.

As manufacturing hubs begin to emerge away from China's coasts, enterprises face the added cost of importing raw materials from overseas, then bulk freighting them by an overloaded rail system inland to the new centers of processing and manufacture. The whole equation has tilted, and is set to tilt much further, towards sourcing raw commodities from deep inland, from the Tibetan plateau and other areas in the western regions of the PRC. The inland tilt is driven by a state willing to invest vast amounts in creating the necessary transport infrastructure.

The Western Development Strategy emphasizes assembling the necessary preconditions for large-scale exploitation of the resources available to China in remote regions, which have never been mobilized and made available to Chinese industry because of the high costs of remoteness, long lead times, lack of transport infrastructure, and the ease of alternative sourcing overseas.

Professors Mao Hanying of the Chinese Academy of Sciences and Zhang Li of Chinese University of Hong Kong define the strategy as follows: “The [Tibetan] region is endowed with substantial proven reserves of mineral resources. Nonetheless, many resources are still underutilized. [...] This is to be a long-term, gigantic and capital-intensive program — one with a timeline of several decades. The strategy encourages the different provinces in the region to restructure their industries in such a way as to maximize local comparative advantages. [...] In the first phase (2000–2010), emphasis will be placed on improving the region's infrastructure. The second phase (2011–2030) will be an ‘acceleration period’ characterized by rapid industrialization and urbanization. Modernization will be fully under way in the third phase (2030–2050). [...] The central government has played a leading role in improving infrastructure. [...] With

regard to resource mobilization, the government's approach shows the old pattern of government-led regional development in the sense that state investment forms the central pillar, at least in the initial stage."²⁸

China's Eleventh Five-Year Plan to 2010 includes massive sums for upgrading highways and railroads, turning inland Chinese cities into hubs of commerce. It is not yet clear which cities will emerge as the dominant hubs of China's northwest and southwest, and which will have to accept secondary roles. The likeliest major hub is Chongqing, already the fastest growing city in China, outstripping even Beijing and Shanghai in the speed and intensity of construction.

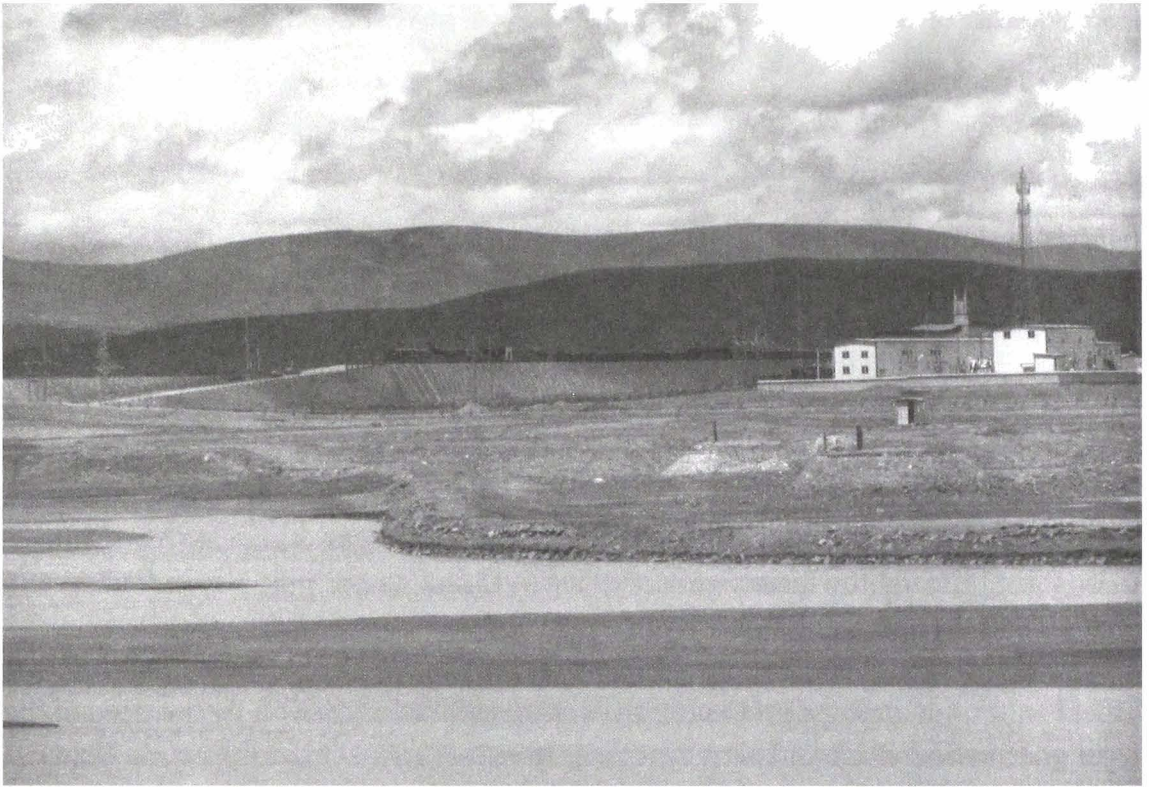
Tibet is not undergoing a process of 'natural' urbanization, driven by the need of the rural poor to find work and better incomes in urban areas. Urbanization in Tibet is a highly-planned, top-down process, which is described by Chinese geographers as "state-sponsored urbanization".²⁹

The authorities state that the rationale for the urbanization of rural areas is to improve social services, to create new productive enterprises, to raise the standard of income and living for rural people and to improve employment prospects for rural Tibetans.³⁰ As this report demonstrates, while the majority of Tibetans live in rural areas, most growth in the economy has been concentrated in urban areas of Tibet, with much of the above-average growth taking place in either construction or the tertiary sector, which includes trade, transport, services and government or Party administration.

Economist Andrew Fischer says: "This radical restructuring of the TAR economy, which has been accelerated since the beginning of the Western Development Strategy in 1999, has been away from productive activities such as agriculture and small-scale industry and into urban services and large-scale construction projects. This is despite the fact that the TAR, along with Yunnan, is the most agrarian and rural province of China."³¹

A nation-building economy imposed from the top down

Fundamental to resource mobilization and economic expansion is the infrastructure of extraction, especially the transport corridors for long-haul bulk freight transport of raw commodities to distant smelters and markets. The creation of railroads and highways, logistics hubs, telecommunications networks and power supplies remains the work of a state still able to allocate investment, both from its own revenues and from raising capital through sale of bonds. It is a nation-building economy imposed from the top down.



Of the 45 train stations between Golmud and Lhasa, 38 are un-staffed, and even fewer are open to passengers. Here, the train to Lhasa leaves the small station of Thogthon, 409 km south of Golmud. (July 2007.) IMAGE: ICT.

To an economist, a rise in mineral extraction, or a rise in the production of wool and dairy products would both count as economic growth, hence growth in per capita GDP. But in reality, mineral extraction undertaken by large corporations providing minimal local employment may add almost nothing to a local economy. Beijing's long-haul plans for mining Tibetan areas confers benefits elsewhere, while Tibet must cope with degradation of the environment, loss of amenities, resource depletion, and a surge of immigrants.

Environmentalists and economists within China have questioned the choice of mineral exploitation as the basis of Tibetan modernization. Chinese economists Hu Angang and Wen Jun warn that the heavy emphasis on mineral extraction in Tibet will make it hard to protect the fragile ecosystem of the Tibetan plateau: "Not only will this [strategy] be harmful to the protection of the environment, it could also possibly lead to history repeating itself in the form of 'pollute first, put in order later' and 'great damage, great pollution'."³² The authors argue that agriculture (including animal husbandry) should be the basis of development in Tibet.

The familiar tension between environmental protection and economic development is especially acute on the Tibetan plateau. Even senior Chinese officials have acknowledged that construction of the railway will have a detrimental impact on

Tibet's ecology — the plateau is a watershed area for several of the earth's great river systems which water much of Asia.

But like the Three Gorges Dam on the Yangtze River, the railroad is a prestige project for the Party despite convincing economic and environmental arguments against it, and the political will of the central authorities in Beijing ensured its successful completion.

Yulong copper mine – a new industrial show-piece

The Yulong mine, in a cluster of commercial deposits around Jomda County (Chinese: *Jiangda*) in Chamdo Prefecture (Chinese: Changdu) just within the borders of the TAR, has the largest copper reserves in the PRC, and is the only known deposit in the region with world-class potential.

It has been hailed by the authorities as “the first major industrialization project in Tibet's overall development of mineral resources, and is therefore a symbolic project” which has “great importance for promoting the development and realizing the transformation of Tibet's mineral strengths into economic strengths.”³³ The official description of the project as ‘symbolic’ indicates its significance to the state and suggests that normal commercial considerations do not apply, as was the case with the railway.

According to Chinese statistics, Yulong has 6.5 million tonnes of proven copper reserves, which represents more than one tenth of China's estimated total copper resources of 62.74 million tonnes.³⁴ Copper is vital to China's development and industrialization, but as a raw material it is in very short supply. A major proportion of the world's commercially produced copper is used by the electrical industries in telecommunications and electronic products. Copper is particularly valuable to China as it aims to establish high-tech industry bases.

Yulong is intended to be a model for large-scale mining on the Tibetan plateau as well as other “border national minority areas”, according to the same official report. According to an official report at the end of October 2007, Yulong had accumulated investments in excess of 320 million *yuan* (US \$43 million).³⁵

There are several other major copper deposits nearby, including Malasumdo, Toshasumdo, Dralakha and Mangdrung. On the basis of United States Geological Survey data, the value of the copper from just three deposits whose size is public knowledge exceeds (at mid-2007 prices) US \$70 billion. The gold, silver and other recoverable

metals, though smaller in amount, can add much more in revenue and profitability. Even if, as the World Bank forecasts, copper and other metals fall from their 2007 high, the potential earnings from mining in this area are significant.³⁶

However, Yulong copper mine and its surrounding copper deposits stand at a distance of 1000 km from any railway facilities that would permit the mines to be developed on anything like the scale that the Chinese authorities envision. Despite the mine's remote location, a senior executive with one of the Chinese companies involved in developing the Yulong copper mine claimed in May 2007 that the mine is now "newly accessible" because of the railroad to Lhasa,³⁷ from which it can be reasonably inferred that a line originating in either Lhasa or Chengdu and passing through the Yulong area is likely to be constructed.

News recently emerged that among several additions to the rail network in Sichuan Province would be a 'Sichuan-Tibet' line. Construction on the line is reportedly going to start in 2008 and is scheduled for completion by 2012. The announcement of the line was in the context of developing Sichuan's capital Chengdu as a "railroad hub"³⁸ and it is assumed therefore that the line will be built from Chengdu. However, the official journal *China Tibetology* published research in 2006 claiming that a line from Chengdu to Lhasa would take 38 years to build at a projected cost of 76.79 billion *yuan* (US \$10.6 billion).³⁹ Nevertheless, the cost and build time would likely be significantly reduced if the 'Sichuan-Tibet' line connected with the planned line from Lhasa to Nyingtri; the line from Chengdu to Nyingtri would also pass through vast copper deposits in the TAR — and would be likely to include a line in the vicinity of the Yulong copper mine.

Beijing's strategic objectives and expansion of the railroad

China is proceeding simultaneously with the construction of several rail lines which will have an impact on Tibet and bring closer the integration of Tibet into not only the Chinese economy but also the broader Asian and even Eurasian economies. This project flows from the Western Development Strategy as it contributes to nation-building, tightening of control, and profitable extraction of resources. Tibet's new railroad will tie Tibet's economy much more closely to China's eastern seaboard industrial centers, and will also significantly enhance Chinese transport links with Nepal, Bhutan, Bangladesh and northern India.

The PRC is planning a massive expansion of its rail network, and announced in 2006

a plan to add (by 2010) 6000 miles of lines (around 60% of the United Kingdom's total) to the already existing 46,000 miles of track, and for that total to reach 60,000 miles of track by the year 2020.⁴⁰

The main line from Xining to Golmud in Qinghai, which was brought into regular operation in 1984, is being double-tracked.⁴¹ Enhanced capacity will accommodate bulk mineral commodities from Tibet en route to distant smelters and even more distant metals markets in China — in addition to the millions of barrels of oil which already leave Tibet each year, and the passengers transiting between Lhasa and Chinese cities.

At present, it seems unlikely that the line from Golmud to Lhasa will be double-tracked, which could be due to a reluctance to construct a second line before it is known how effectively the existing line performs under the extremely harsh conditions of the plateau.⁴² (See 'The world's 'third pole' — climate change and development in Tibet', p. 231.) However, Lhasa is still likely to serve as a hub for the distribution of mineral ores from Tibet into the Chinese interior. There is already planned a rail extension that will facilitate transport between Lhasa and the Shetongmon (Chinese: Xietongmen) copper deposit in Shigatse Prefecture (Chinese: Xigaze), which has led to the assured involvement of the Canadian company Continental Minerals in exploration there. (See 'Foreign investment in the railroad and mining in Tibet', p. 193.) The 254 km spur to Shigatse is due to be completed by 2010 and is expected to cost 11 billion *yuan* (US \$137.5 million), according to official estimates.⁴³

Another rail spur, 142 km in length, is being constructed in Kangtsa County (Chinese: Gangcha) in Tsochang Tibetan Autonomous Prefecture (Chinese: Haibei TAP), to serve new coal mines.⁴⁴ Kangtsa is one of the most rural counties in Tsochang in Qinghai Province — part of the Tibetan region of Amdo — with a largely nomadic population. This development offers the prospect of an influx of Chinese into a Tibetan area that had previously been relatively undisturbed.

Nagchu (Chinese: Naqu) in the TAR is being expanded into a major rail junction, which will include a new line southeast to Bayi in Nyingtri Prefecture (Chinese: Linzhi). An August 2007 article on a Chinese business web portal reported that preparatory work for construction of this line had already started.⁴⁵ This new line east from Nagchu stems from the ongoing construction of the huge Nagchu Logistics Center being built at a cost of 1.5 billion *yuan* (US \$750 million), and which is due to be completed in October 2008. The new center will cover an area of 533 hectares (1317 acres), including a large area for handling bulk cargo. It is already attracting skilled transport technicians and will draw many migrant Chinese job-seekers.⁴⁶



This rare image, provided by a visitor to Tibet, depicts a military training exercise just outside Lhasa. There has been a stepping up of military readiness on the Tibetan plateau coinciding with the construction of the railroad in order to prepare for any contingencies that might threaten China's interests. The official Chinese press acknowledged in December 2007 that the railway will become "a main option for the armed forces to transport troops".

IMAGE PROVIDED BY A VISITOR TO THE AREA.

A recent official report stated that at present the most important products being transported on the railway were metal ore and mineral water. Tibet's Glacier Mineral Water has now reached the markets of Beijing and Shanghai, and is being offered on the international market.

A twin-track agenda: Extraction of resources and consolidation of control

There are also plans, with financing from the Asian Development Bank, to install a more expensive railroad that will connect Lhasa, via Nyingtri, to the railroad in Yunnan Province that runs from Dali to Lijiang at the foot of the Tibetan plateau.⁴⁷ This line, which has an estimated cost of US \$7.6 billion,⁴⁸ would not only enable access to copper and gold deposits in Kham, it would also create a new loop connecting central Tibet to the rest of China, as well as to southeast Asia via Kunming in Yunnan. According to the state media, this particular branch of the line, which would be around 1600 km, would not only be of economic significance but also of critical importance "to strengthening ethnic unity and national defense".⁴⁹

An official report in July 2007 confirmed that the spur line to Shigatse mentioned above, as well as the line from Lhasa to Nyingtri (which would almost certainly connect with the line planned from the Nagchu Logistics Center to Bayi in Nyingtri) would be completed “within 10 years”. The same report added that a rail line from Shigatse all the way to Nepal would also be completed in the same time period.⁵⁰ The latter pledge has generated concern in New Delhi because of the obvious security implications — the Indian government is watching China’s influence over Nepal closely.⁵¹

“Railways linking Lhasa with cities in north-west and south-west China will increase China’s influence in Nepal and Bhutan, states India has traditionally regarded as vital strategic buffers,” said Asia analyst John Garver. “Nepal will find more viable economic options to its north than dependence on economic cooperation with India.”⁵² In December 2007, Nepalese Prime Minister Girija Prasad Koirala, urged the Chinese government to extend the Tibetan railway down to the northern border of Nepal. PM Koirala also reiterated his government’s support for the ‘one-China’ policy.⁵³

There has been a stepping up of military readiness on the plateau, made possible by improved technology and infrastructure. The official Chinese press acknowledged for the first time in December 2007 the military applications for the railway, reporting that the Golmud-Lhasa railway was used for transporting troops from Xining to Lhasa. “In the past, all the troops entering or leaving Tibet had to be transported by air or road, but in the future the railway will become a main option for the armed forces to transport troops,” Xinhua reported.⁵⁴

The mapping of mineral deposits and the establishment of an infrastructure that makes their exploitation possible has prompted a re-evaluation of the region’s importance. This is likely to be in part because of the awareness of possible new targets for sabotage, but it is also linked to protecting China’s increased interests in the region. “Historically, difficult terrain minimized China’s connections with the lands to its west and south,” writes John Garver. “Now for the first time it is systematically applying modern transportation technology to penetrate those lands [...] the new China-built railways and roads will bring greater flows of Chinese goods, capital, people, ideas and cultural influences. Resources and goods will flow eastward to China. Links between local economies and China will thicken. [...] Greater Chinese presence will create Chinese interests that will require protection.”⁵⁵

The strategic value of Tibetan regions of the PRC and their resources appears to have resulted in the increased deployment of China’s offensive mechanized forces to these regions in order to prepare for any contingencies that might threaten the interests of

the state. The vehicles and weapons in the new mechanized division are reportedly lighter than those in other People's Liberation Army (PLA) mechanized units, reducing their logistical footprint and providing tactical mobility, allowing for more roads and bridges to be used during operations. Military analyst Martin Andrew writes: "Lighter units are also more easily re-fueled and re-supplied. On the few good roads in the rural regions of the Xinjiang Uyghur Autonomous Region [XUAR, East Turkistan] and Tibet, the ability to operate for extended periods is an invaluable advantage. Presently, only wheeled armored fighting vehicles operate in Tibet; tracked infantry fighting vehicles armed with 30 mm automatic cannons and heavier support weapons would greatly assist these forces in the event of a widespread insurgency or an attack by Indian forces."⁵⁶

The expansion of China's influence in Tibetan areas and the construction of transport links that have both civil and military applications have concerned Indian leaders. Some analysts argue that the growth of the Chinese presence and capabilities on India's borders is increasingly presenting Indian leaders with the choice of accepting China as Asia's dominant power or of co-operating with the US and Japan to offset China's growing influence.⁵⁷

An Indian news source reported in January 2008 that troops and improved facilities in Tibet contributed to "the immediate military threat that stares India in the face", according to defense analysts Pravin Sawhney and Ghazala Wahab, writing in India's *Force* magazine. After noting that the PLA has stepped up its "operational readiness" on the Tibetan plateau, with an increase and improvement in airfields as well as the establishment of five to six logistics brigades in Tibet which will hold fuel and ammunition, the analysts also confirmed that each of the two Military Area Commands in Chengdu and Lanzhou maintain one lightly armed, division-size rapid-reaction force for quick deployment.⁵⁸ The analysts concluded: "[China's intrusions across the Indian border], backed by the PLA's excellent border management through infrastructural development, and operational readiness for a border war is the immediate military threat that stares India in the face. [...] For India, the challenge is to match the PLA for effective deterrence. This will however not be easy."

Following a visit to the Sino-Indian border in Sikkim in December, 2007, India's Defence Minister, A K Antony, admitted that "Infrastructure on the Chinese side is far superior. [...] It is an eye-opener for me. There is no comparison between the two sides."⁵⁹

The geopolitical significance of the collapse of geographical barriers to the expansion of China's influence have also been noted by the US, in terms of the questioning of the international consequences in the growth of China's capabilities.⁶⁰

Achieving political 'stability' through development

One of the main aims of the Western Development Strategy is to ensure the continued authority of the Party over the 'minority nationality' areas of the PRC, and to achieve 'stability' through development. This is quite openly acknowledged by the Chinese government. The then Chinese Premier Zhu Rongji said in March 2000 that "common prosperity" would result in the "strengthening of national unity, safeguarding of social stability, and consolidation of border defense", which are references to issues concerning Tibetans, Uyghurs and other 'ethnic minorities', and the authorities' fears of 'separatism' (advocating separation from China).

One of the consequences of the emphasis on social stability and security concerns is that the marginalization of Tibetans from the development of the economy has been reinforced by the suppression of Tibetan culture and religion. Religious repression has been particularly harsh because of the close link between religion and Tibetan identity; Tibetan Buddhism continues to be an integral element of Tibetan identity and Tibetan nationalism, and is therefore perceived as a potential threat to the authority of the state and 'unity' of the PRC. The Chinese authorities are particularly systematic in their attempts to undermine Tibetans' loyalties to the Dalai Lama, whom they describe as a 'separatist'.⁶¹

Andrew Fischer says: "Lack of tolerance [to an evolving nationalist discourse and response to ethnic exclusion] adds force to feelings of resentment and alienation among many Tibetans, even if the material situation of some slowly improves with the annual addition of motorcycles, mobile phones and other consumer durables to their stock of goods. In this way, the government strategy of winning over the hearts and minds of Tibetans with a dazzling display of subsidies is sabotaged by its own internal contradictions."⁶²

Even while Tibetans face oppression and a narrowing of political space to express themselves, Tibetan cultural identity has proved remarkably robust and resilient, especially so in Tibetan areas outside the TAR. The continued migration of Chinese into Tibet may even have intensified Tibetans' sense of a separate identity, and fostered a desire to resist assimilation. Heavy-handed policies aimed at ensuring stability only risk creating the dissent and unrest that the state fears.

REPRESENTATIONS OF THE RAILROAD IN THE WESTERN MEDIA

China has devoted tremendous resources towards publicizing the railroad as beneficial to Tibet. Despite the realities revealed in this report, that representation is sometimes taken at face value. The combination of the Chinese authorities' promotion of the joys of railroad travel and the involvement of Western businesses such as Rail Partners in luxury three-day train journeys from Shanghai to Lhasa resulted in some almost uncritical coverage of the opening of the railroad in the Western media, with the ethics of such luxury travel left unchallenged.

A *New York Times* article entitled 'Riding the Velvet Rails' described the journey as follows: "Even the waitresses, normally surly on Chinese trains, seemed to have attended remedial charm school — they laughed and bowed slightly as they handed out plates of noodles and spicy Sichuan sautéed tofu. And next year, the trip will become even more luxurious; the company Rail Partners plans to open a high-end route to Lhasa that will include 24-hour butler service and flat-screen TVs".⁶³

In some glossy magazines or broadcasts, the profound marginalization faced by Tibetans as a result of China's central economic planning is shrugged off as the inevitable outcome of globalization.⁶⁴ The reality is more complex; no country is exempt from globalization, and 'culture' is subject to constant adaptation, but the flourishing of a distinctively Tibetan economy and culture in the global era has been undermined by the hardening of the Party's Tibet policies since 1990 rather than by global influences.

Development policy specialist Gabriel Lafitte, who has studied the impact of the railroad,⁶⁵ commented: "To say that modernity is inevitable naturalizes a state-driven investment program to secure the frontiers and quell the minorities. It is not at all inevitable that all Tibetan towns will expand dramatically, or that Tibetans will leave the land for the towns. That this is happening is due to costly social engineering bankrolled on a huge scale by Beijing, for nation-building and security reasons, as well as to exploit Tibet's rich mineral reserves."

Impacts: How Tibet's railway and economic policies are leading to increased social exclusion

The Chinese authorities state that the new railroad will enable the Tibetan people to overcome the disadvantages of remoteness, accessing distant urban markets, thus increasing their incomes and overcoming poverty.



Despite nearby construction, pilgrims prostrate in front of the Thousand Buddha Wall on Chagpori Hill, opposite the Potala Palace in Lhasa. The Thousand Buddha Wall is part of the pilgrimage path known as the Lingkhor, which once surrounded Lhasa, but only partly remains today. The continued migration of Chinese into Tibet has intensified the sense of separate identity among Tibetans, and seems to have fostered a strong desire in Tibetans to resist ethnic assimilation. An important aspect of this is continued devotion to their religious identity and to the Dalai Lama. IMAGE: ICT.

In general, investment in transport infrastructure is regarded as a positive thing for a local population. However, the circumstances of Tibet and the nature of railway construction there compel a different evaluation. The majority of Tibetans find themselves marginalized amid the rapid economic development. More and more, they are excluded from any benefits that may flow from the construction of the railway.

Tibetans neither initiated nor directed the planning of the railroad, and generation of wealth as a result of the railroad is likely to be concentrated in urban areas and resource extraction centers whose main beneficiaries will be Chinese. This is despite the fact that the TAR, along with Yunnan, is the most agrarian and rural province of China.

Andrew Fischer told ICT: "The authorities are pursuing a policy of assimilation, as opposed to looking at the genuine benefits to the economy that could emerge from a

‘Tibetan-ization’ of development. The question is how Tibetans can be given the space to be able to adapt to the rapid changes in their society.”

In order for the railroad to benefit Tibetans in the Chinese-run economy, there must be a realization that encouraging, coercing and forcing Tibetans out of agriculture and into other sectors where they have no advantage is one of the main reasons for Tibetans’ marginalization. Tibetan producers, farmers and pastoralists currently have neither the literacy, real-time market information nor the capital to be fully informed, whereas buyers of Tibetan commodities are much better informed, placing Tibetans at a significant disadvantage. The remote upland poor can benefit only if they have the surplus production, the training, access to microfinance and an open market that is not stacked against them.

Not only do the majority of Tibetans have less ability to participate in the growing parts of the economy, but due to the impact of Chinese policy, their traditional bases in farming and herding are less and less able to sustain their livelihoods.

A more skillful alternative?

This report shows that the new rail and road networks into and surrounding Tibet are intended to enable deeper penetration of Tibet for the extraction of Tibetan minerals and other raw materials in demand by Chinese industry, as well as to maintain China’s control over the region.

Far from empowering Tibetans to participate in the global economy, China is exploiting Tibet as the source of raw unprocessed bulk commodities needed by manufacturers in China’s interior. The processing, smelting, value-adding and profit-taking are likely to be focused in regional inland hub cities such as Chongqing, Chengdu, Lanzhou and Xi’an. The land and people of Tibet will have to live with the environmental and social costs of pollution and destruction, immigrant mining towns and remittance economies draining capital away from Tibet back to the inland provinces where the mine workers come from.

If present policies continue, the railroad will accelerate China’s plans for Tibet to become a major supplier, by bulk rail freight, of minerals and perhaps energy, its northern oil and gas fields piped and rail trucked out to Chinese industrial users, its enormous hydropower potential on all major Tibetan rivers transmitted over long distances, on cables made of Tibetan copper, to the industrial centers of southern China.

An alternative strategy, motivated by the intention of lifting the incomes of Tibetans and alleviating poverty, could use the new rail and road links to the wider world as a beginning, part of an integrated package that helps Tibetans. Fischer and other analysts recommend the adoption of a much more proactive, affirmative and preferential policy towards Tibetans, particularly with regard to the rural and urban poor, encompassing education, training, employment and business, and combined with a variety of locally-oriented infrastructural and service developments. This would need to involve a major expansion of social services, primarily in education and health care, but also in various forms of social security.⁶⁶ A re-orientation of economic strategy towards local integration and ownership would begin ‘Tibetan-izing’ the process of development.

Some local cadres and scholars, both Tibetan and Chinese, together with national and international NGOs, are already promoting such ways forward. It remains to be seen whether their efforts will be successful, but they require help from international NGOs and governments in supporting Tibetan-oriented development initiatives.

Current development plans in Tibet focus on what China needs, what China can extract, and how the Party can consolidate its power over the PRC, rather than what would most skillfully lift Tibetan incomes. By continuing to pursue a model of development that appears to increase rather than close the gap between urban and rural, rich and poor, Chinese and Tibetan, the Chinese state risks further marginalizing and alienating the Tibetan people, potentially undermining the political objectives of its current development: a stable Tibet, united within China.

“Woeser [a well-known Tibetan writer⁶⁷] told me about a tale that had spread among Tibetans as the railroad crossed into the Tibetan grasslands to the north of Lhasa. Construction workers, it was said, had dug up a frog from the earth. The frog had been badly injured; but as the story moved from teahouse to teahouse he became bigger in each retelling, to the point where, in one story, he had to be hauled off in a truck.

Woeser said that the story would make sense if you knew of the high status of animals as guardian spirits in Tibetan culture. She explained that the frog injured by Chinese workers represented the Tibetan sense of defeat and frustration over the railway.”

— Pankaj Mishra, ‘The Quiet Heroes of Tibet’,
New York Review of Books, January 17, 2008.

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- ¹ 'Grand development of tourism puts the world's attention on Tibet's social and economic development' [张庆黎: 旅游大发展让西藏经济社会发展受到世界关注], Interview with Zhang Qingli, *Reporters' Notes* [记者观察], Issue 20, September 2007, available (in Chinese) at: www.jzgczz.com.
- ² In conversation with an ICT researcher in Bodh Gaya, India.
- ³ The Qinghai-Tibet railway is described in the official Chinese press as the 'centerpiece' of the Western Development Strategy, in much the same way that the 'Bird's Nest' stadium is described as the 'centerpiece' of the Beijing Summer Olympics. See, for example: 'US \$660m poured into Qinghai-Tibet railway', Xinhua, December 1, 2004, available at: www.chinadaily.com.cn.
- ⁴ Initial estimates increased dramatically during construction. A *China Daily* report on October 15, 2005 gave the total investment on the project as 33 billion *yuan* (US \$4.1 billion).
- ⁵ 'Development of China's Overland Transportation Links with Central, South-West and South Asia,' John Garver, *The China Quarterly*, (2006), 185: pp. 1–22.
- ⁶ Source as endnote 1.
- ⁷ In 1955 and 1956, five books were published celebrating the "exploits of model workers in the construction" of the highway from Qinghai and Sichuan to Lhasa, with chapter headings such as 'The Trail Blazers' and 'Make Roads Climb Up the World's Roof'. See: 'Xikang-Tibet and Qinghai-Tibet Highways', Peng Fengye, Popular Literature Publishing House, Beijing, 1955; 'The Xikang-Tibet and Qinghai-Tibet Highways Across the 'Roof of the World'', People's Communications Publishing House, Beijing, 1955; 'Xikang-Tibet Highway', Yang Cui (ed.), Zhejiang People's Publishing House, 1955; 'Xikang-Tibet Highway', New Knowledge Publishing House, Shanghai, 1956; 'People's Xikang-Tibet Highway', Guan Jifen (ed.), Sichuan People's Publishing House, 1956. Thirty years later, a three-volume set of 1115 pages celebrated this achievement all over again, including 38 articles on the exploits of model workers. See: 'Documents in Commemoration of the 30th Anniversary of the Sichuan-Tibet and Qinghai-Tibet Highways', Tibetan People's Publishing House, Lhasa, 1984, 3 vols.
- ⁸ 'The construction of the Qinghai-Tibet railway and it's impact on Tibetan development', Zong Gang, *China Tibetology Magazine*, June 4, 2006, available at: <http://info.tibet.cn>.
- ⁹ 'Safety since the Qinghai-Tibet railway has gone into operation has been "zero accidents"' [青藏铁路开通以来运营安全“零事故”], Xinhua, June 26, 2007, available (in Chinese) at: www.xz.xinhuanet.com.
- ¹⁰ 'Naqu [Nagchu] to hold public lectures on "The railroad passes our family's door"' [那曲将办“铁路从我家门过”主题报告会], Xinhua, May 16, 2007, available (in Chinese) at: www.xz.xinhuanet.com.
- ¹¹ Information based on an interview with a Tibetan herder now in exile, referring to the period when the railway was officially opened in summer 2006. The herder said that households in his area were issued with an official booklet which detailed a code of conduct for treatment of the railway tracks. Local officials apparently announced punishments as severe as execution for those who violated the code, but did not actually say whether special meetings had been called to make these announcements.
- ¹² 'Railway breaks seclusion, spurs investment in Tibet', Xinhua, December 10, 2006, available at: <http://news.xinhuanet.com>.
- ¹³ In Chinese discourse, *Xibu da kaifa* [西部大开发] is referred to as a 'strategy' or a 'plan' rather than a 'campaign'. Throughout this report, it will be described as the 'Western Development Strategy'.
- ¹⁴ The Western Development Strategy covers the five provincial-level regions with ethnic autonomous status, which are Xinjiang Uyghur Autonomous Region, Tibet Autonomous Region, Guangxi Zhuang Autonomous Region, Ningxia Hui Autonomous Region and Inner Mongolia Autonomous Region; also included is Chongqing Municipality which although located within Sichuan Province, is administered directly from Beijing (akin to the three other major cities of Beijing itself, Shanghai and Tianjin); other provinces considered

part of the PRC's western regions and therefore part of the Western Development Strategy are Gansu, Guizhou, Qinghai, Shaanxi, Sichuan, and Yunnan Provinces.

¹⁵Source as endnote 5.

¹⁶To speak about a subsidy-driven economy, as Beijing represents it, of course does not take into account the 'hidden economy' of Tibet's mineral and natural reserves that have already been exploited over the past 50 years.

¹⁷'The Problem of Selecting the Correct Path for Tibetan Modernization (Part 1)', Hu Angang and Wen Jun, *China Tibetology*, 2001/1, available at: <http://info.tibet.cn>.

¹⁸'Perversities of Extreme Dependence and Unequal Growth in the TAR', Andrew M Fischer, 2007, available at: www.tibetwatch.org.

¹⁹China-based correspondent Howard W French wrote in the *New York Times* on January 13, 2008: "Poverty is most severe in China's geographic and social margins, whether the mountainous areas or deserts that ring the country, or areas dominated by ethnic minorities, who for cultural and historic reasons have benefited far less than others from the country's long economic rise. But it also persists in places like Henan, where population densities are among the greatest in China, and the new wealth of the booming coast beckons, almost mockingly, a mere province away." 'Lives of Poverty, Untouched by China's Boom', Howard French, *New York Times*, January 13, 2008, available at: www.nytimes.com.

²⁰Depending on which official statistics are used; rates have since started to fall.

²¹According to figures from the official State Statistical Bureau. This is a situation that remained stable from 1997 until around 2003, when disposable income rose slightly, again according to official statistics. Cited in 'State Growth and Social Exclusion in Tibet: Challenges of Recent Economic Growth', Andrew Martin Fischer, National Institute of Asian Studies (NIAS reports no. 47), Copenhagen 2005. See: www.niaspress.dk. Although official acknowledgment of the serious problems and levels of poverty in Tibetan areas is rare, in some areas admissions are made in the state media. An official inspection party visit to Kardze Tibetan Autonomous Prefecture (Chinese: Ganzi TAP) in Sichuan in 2007 concluded that: "Economic development is backward, stability is a heavy task, tax revenue is low, local allocation of funds to state projects is lacking, poverty is widespread, cadres are not paid well, policies for mineral exploitation are incomplete, endemic diseases are serious, and [there are] weak foundations for social undertakings and grass-roots organizations. 'Luhuo convenes a Tibetan areas policy research forum' [炉霍召开藏区政策调研工作会], *Ganzi Daily*, December 13, 2007, available (in Chinese) at: www.newssc.org. A Reform and Development Committee local inspection party led by Wang Xinhuan went to Drango County (Chinese: Luhuo) to conduct research, and convened a work briefing meeting attended by delegates from 10 counties.

²²Referring to natural resources throughout all of the PRC, Article 9 of the Constitution of the PRC reads in part: "Mineral resources, waters, forests, mountains, grassland, unreclaimed land, beaches and other natural resources are owned by the state". See: *The People's Daily* website for the Constitution of the PRC in full, available at: www.peopledaily.com.cn.

²³'In Exile from the Land of Snows: The Definitive Account of the Dalai Lama and Tibet since the Chinese Conquest', by John F. Avedon, reissued version, 1997, Harper Perennial.

²⁴'Tibet: A Human Development and Environment Report', Environment and Development Desk, Department of Information and International Relations, Tibetan government in exile, Dharamsala, India, December 2007.

²⁵'Metal Reserves Found on the "Roof of World"', *China Daily*, February 13, 2007, available at: www.chinadaily.com.cn.

²⁶'Jade from Qinghai to make Olympics medals' by Ma Xiangfei, *Xinhua*, January 2, 2008. Qinghai vice governor Jidi Majia announced to a group of reporters that the Beijing Organizing Committee of the Olympic Games had formally confirmed Qinghai jade will be used to create Olympic medals. The gold, silver and bronze

medals incorporate a distinctive brand of jade, which will be obtained “from a Kunlun Mountain area which locates in Ge’ermu city”, according to the report.

- ²⁷ ‘Huge mineral resources found on Qinghai-Tibet plateau’, *China Daily*, February 13, 2007, available at: www.chinadaily.com.
- ²⁸ ‘Developing China’s West: A critical path to balanced national development’, Mao Hanying and Zhang Li, *Resource Mobilization*, ch 7 in Y.M. Yeung and Shen Jianga eds., Chinese University Press, Hong Kong, 2004. The geographers, highlighting the issue of the importance of ‘social control’, continue to outline the strategy as follows: “Only when the central government leads the development can the region make its start. [...] For reasons of social control, among others, the Chinese authorities cannot afford to overlook the chronic underdevelopment of the country’s western region. The Western Development Strategy is an ambitious top-down effort. [...] An overwhelming proportion of central government funding is being directed to physical infrastructure, where non-government investment is scarce. [...] Production factors (capital and talent), if subject only to market forces, will not necessarily move to the western region as the government wishes, at least in the initial stage of development. This suggests that resource mobilization cannot be left to *laissez-faire* policies and that the central government must play a significant redistributive role in directing the movement of production factors.”
- ²⁹ ‘Understanding dual-track urbanization in post-reform China: Conceptual framework and empirical analysis’, Jianfa Shen, *Population, Space and Place*, Volume 12, Issue 6, November/ December 2006, pp. 497–516.
- ³⁰ The Tibetan Government in Exile’s (TGiE) Department of Information and International Relations writes in its December 2007 report on development and environment in Tibet: “Traditionally, Tibetans used almost all the available land by dispersing themselves across the landscape according to the season, in tune with the natural rhythms of seasonal productivity. This resulted in minimal negative impact on the fragile grasslands, which was essential because Tibet’s intense cold and gale force winds can quickly strip soil from overgrazed land and reduce it to bare rock. Tibet is suited to dispersed human populations, and not to intensive concentrations of people that create massive negative local impacts. This is one basic reason why Tibet is unsuited to urbanization, despite the fact that urbanization is now a global trend.” See: ‘Tibet: A Human Development and Environment Report’, Tibetan Government in Exile, December 2007, available at: www.tibet.net.
- ³¹ ‘Deciphering Economic Growth in the Tibet Autonomous Region’, Tibet Information Network (TIN) News Update, April 8, 2003; and ‘The rich get richer, and the poor? Rural poverty and inequality in Tibet — indications from recent official surveys’, TIN News Update, May 31, 2003.
- ³² Source as endnote 13.
- ³³ ‘Hao Peng stresses: ensure that development and construction projects are on time to achieve goals’ [郝鹏强调加强: 确保开发建设目标如期实现], *Tibet Daily*, December 22, 2007, available (in Chinese) at: www.chinatibetnews.com.
- ³⁴ ‘Mining Tibet: Mineral exploitation in Tibetan areas of the PRC’, Tibet information Network, 2002. Also see ICT report, ‘China announces development of major Tibet copper mine to go ahead’, April 7, 2005, available at www.savetibet.org.
- ³⁵ ‘Tibet firmly grasps the development of mining, build Yulong Copper Mine quickly and well’ [西藏紧抓矿业建设 又好又快建玉龙铜矿], *Xinhua*, November 6, 2007, available (in Chinese) at: www.xz.xinhuanet.com. In the same article, TAR Deputy Governor Meng Deli was quoted as saying that workers at the mine should “take the spirit of the 17th Party Congress as the guide, strengthen technological creativity and energy-saving and environmental work, so that we have not only mountains of gold and silver, but also mountains of green and rivers of blue, making Yulong Copper Mine into a first-class modern environmental mine”.
- ³⁶ See: <http://wrgis.wr.usgs.gov/open-file/of02-268/> and using the mid-2007 copper price US \$7800 per tonne. A Yulong deposit of 850 million tonnes with average copper content of 0.84% means a copper metal content

of 7.14 million tonnes, worth US \$55.7 billion. Malasumdo deposit of 228 million tonnes of average 0.45% copper content means 1.026 million tonnes of copper metal worth US \$8 billion. Toshasumdo deposit of 236 million tonnes, averaging 0.36% copper gives a yield of 0.85 million tonnes copper metal, worth US \$6.63 billion. Altogether these three would produce 9.02 million tonnes of copper, worth US \$70.33 billion. China mines 762,000 tonnes of copper a year (2005 stats from USGS) so these three mines hold the equivalent of 12 years' domestic Chinese production.

³⁷'China Zijin seeks more overseas mines', Reuters, May 17, 2007.

³⁸'Sichuan to build numerous new inter-provincial rail lines', NewsTrak Daily, January 15, 2008.

³⁹'Construction of the Qinghai-Tibet railway and its impact on the development of Tibet' [青藏铁路的建设与对西藏发展的影响], Zong Gang [宗刚] *China Tibetology* [中国藏学], Issue 2, 2006, pp. 62–70. The article claimed that the Sichuan-Tibet railroad will pass through Kardze (Chinese: Ganzi), then due west and into Chamdo (Chinese: Changdu) in the TAR, before heading southwest towards Nyingtri, where it would meet the proposed line out of Lhasa. Another suggested line, according to the article, would run southwest from Lanzhou in Gansu Province to Machu (Chinese: Maqu) before heading due west all the way through Jyekundo (Chinese: Yushu) to Nagchu (Chinese: Naqu) where it would connect with the Qinghai-Tibet railway. This line has a projected cost of 63.84 billion *yuan* (US \$8.8 billion) and a build-time of 32 years, according to the *China Tibetology* article. A Yunnan-Tibet line would run from Kunming, the capital of Yunnan Province, along existing lines to Dali, then northwest through Dechen (Chinese: Deqin) to connect with the line from Lhasa to Nyingtri. This line also has a projected build-time of 32 years, and would cost 65.38 billion *yuan* (US \$9 billion).

⁴⁰'China starts the biggest rail expansion in history', *The Times*, July 27, 2006, available at: www.timesonline.co.uk.

⁴¹'China to beef up railway construction in central, western areas', *Asia Pulse*, March 26, 2007, available at: www.asiapulse.com.

⁴²Australian analyst Gabriel Lafitte, who has written a number of original papers on the railway, surmises that the logical time to build a second track would have been while doing the first, with all the construction equipment available. He also believes that given existing freight traffic and plans to expand this, a second line is not justified. But the most compelling reason why it is not currently being double-tracked is that engineers are still ultimately unsure of the long term cumulative effect of small incremental changes in temperature, and may therefore be postponing any duplication of the line until such time that they have accumulated much more operational data on how well the existing line works.

⁴³'Lhasa-Xigaze rail section to finish building in 2010', Xinhua, March 9, 2007, available at: <http://info.tibet.cn>.

⁴⁴A report published by *China Bidding* stated that the Chaidar-Muli Railway control project was launched 'recently' in Gangcha County in Qinghai province, involving a total length of 142.04 km. "Two years later, the transportation capacity of coal of Chaidar-Muli Railway will increase to 14 million tonnes, and the coal reserves along Chaidar-Muli Railway is 3.3 billion tonnes", *China Bidding*, April 28, 2006, available at: www.chinabidding.com.

⁴⁵'Now that the train has entered Tibet' [火车进藏之后], *China Investment* [中国投资] Issue 2, 2007, pp. 50–54, February 2007, available (in Chinese) at: www.chinainvestment.com.cn. This magazine is published by the State Reform and Development Commission.

⁴⁶According to an official report in the Chinese media, the center covers a planned area of 533 hectares, including a 213-hectare area for bulk cargo and a 33-hectare area "for handling finished oil and dangerous products". See: 'Modern logistics center to be built in Tibet', Xinhua, September 9, 2007, available at: <http://en.tibet.cn>.

⁴⁷'ADB Assists Fresh Railway Construction in China', Xinhua, January 20, 2007, available at: www.china.org.cn. See also endnote 33 above.

⁴⁸Source as endnote 5.

⁴⁹'Feasibility Study Stepped Up for Building Railway to Tibet', *The People's Daily*, December 11, 2000, archived by Tibet Environmental Watch, available at: www.tew.org. The report stated: "[The Qinghai-Tibet] railroad is of great political, economic and military significance to accelerating the regional economic development of Tibet and western Yunnan Province and to strengthening ethnic unity and national defense."

⁵⁰'The Qinghai-Tibet railway to extend Tibetan trade in all directions' [青藏铁路将西藏贸易之路通向四面八方], *Xinhua*, July 6, 2007, available (in Chinese) at: <http://info.tibet.cn>. Experts consulted by ICT were highly dubious that a railway could be built over the precipitous decline from the Tibetan plateau down into Nepal, but they were careful to point out that such a line might be more feasible now as a result of Chinese engineers' experience of designing and building the Qinghai-Tibet railway.

⁵¹The Indian Ministry of External Affairs or South Block is the major branch of government entrusted with the conduct of Indian foreign policy that includes Nepal. The Ministry of Defense and the Indian Army make up the second. Another important Indian branch of government dealing with Nepal is the Research and Analysis Wing. Analyst Prakash A Raj told the *Kathmandu Post* on January 3, 2008, that: "The priority of Indian policy in Nepal has been India's 'national security' which would be gravely endangered if Nepal were to be ruled by an unfriendly government or if it were to be closely allied to either China or Pakistan. [...] What happens in Nepal has a vital bearing on the security of north India, especially the Gangetic Plains and the northeast, which is connected by the narrow Siliguri Corridor".

⁵²Source as endnote 5.

⁵³'PM urges China to bring railway network up to border', *Nepalnews*, December 19, 2007, available at: www.nepalnews.com.

⁵⁴'Qinghai-Tibet Railway transports troops for first time', *Xinhua*, December 1, 2007, available at: www.china.org.cn.

⁵⁵Source as endnote 5.

⁵⁶'Guarding the West: China's new mechanized infantry division', Andrew Martin, *China Brief*, vol 7, no 10, May 16, 2007, available at: www.jamestown.org. Andrew Martin retired from the Australian Defence Force after 28 years of service and holds a Masters Degree in Asian Studies.

⁵⁷Source as endnote 5.

⁵⁸'China's Preparedness for Border War "Immediate Military Threat" to India', Pravin Sawhney and Ghazala Wahab, *Force*, January 5, 2008, available at: www.forceindia.net.

⁵⁹Cited by Claude Arpi in *Sify News*, December 31, 2007, 'Indian defence and the Abominable No Men'.

⁶⁰For further analysis, see source as endnote 5.

⁶¹This is despite the fact that the Dalai Lama has consistently spoken out for a genuine autonomy under the sovereignty of the PRC.

⁶²Source as endnote 17, p. 157.

⁶³'Riding the Velvet Rails', Joshua Kurlantzick, *New York Times*, August 12, 2007, available at www.nytimes.com.

⁶⁴In a November 2007 piece for *National Geographic*, journalist Scott Anderson characterized the issues facing Tibet as being similar to those faced by many places due to globalization: "In China, certainly, but most everywhere else in the world too, we will have to venture into the countryside, seek out the old men in corners of parks take to the backstreets. It isn't really a question of it being a good or bad thing, just inevitable 'Fast Track to Tibet', *National Geographic Adventure*, November 2007, available at: www.nationalgeographic.com.

⁶⁵Lafitte, who is based in Australia, presented a paper on nomadic poverty at a State Council sponsored conference on poverty in Western China, held at Sichuan University, in 2006

⁶⁶Source as endnote 17. Fischer recommends raising the per capita level of social services together with focused campaigns to remediate lagging in specific areas such as adult illiteracy, tuberculosis, malnutrition, or child and maternal mortality.

⁶⁷See also Woesser's book with Wang Lixiong, 'Unlocking Tibet: A Chinese Author's Perspective on Tibet issue', privately published, 2005.



The Potala Palace is still the principal icon of the central Tibetan capital, which received more than a million mostly Chinese visitors in the year after the railroad's construction, according to the Chinese media. Such was the pressure on the delicate structure of the Potala that the authorities have now imposed limitations on the number of visitors, although experts believe that still not enough is being done to protect Tibet's architectural heritage. (July 2007.) IMAGE: ICT.

“THE SECOND INVASION”

Chinese migration to Tibet and the railroad

“I notice that whenever the train goes through a major station, Han Hong’s ‘Sky Road’ comes over the public address system, which brings to mind that when you fly into Lhasa, the song played is ‘The Condor’ sung by Yadong.² Each of the two songs uses interesting symbols: the dragon describes the train, and the condor describes the aircraft, both rushing towards Tibet and doubtless representing the advent of unstoppable modernization. But there is stealth on the part of the pilots and drivers, they occupy a commanding position, and are the sole arbiters of power, with the great and awesome power of an emperor, and so gratitude for ‘barley beer and butter tea being sweeter’ by the ‘Tibetan sons and daughters’ can only be expressed with ‘Happy singing voices that are heard all around’.”

— Account by a Tibetan writer of a journey by train to Lhasa, January 2007, published on a Chinese language website

Summary

TIBETAN FEARS that the railroad would result in an increased influx of Chinese into Tibet were well-founded. According to official statistics, the Qinghai-Tibet railroad transported “1.5 million passengers into Tibet” during its first year of operation,³ and the authorities made the unusual admission that the majority of these passengers were migrant workers or business people rather than tourists.⁴ An earlier report by the Chinese state media acknowledged that the railway will “attract tourists, traders, and ethnic Chinese settlers” to the region.⁵

There is evidence that just as rail connections to Inner Mongolia and Xinjiang (XUAR) in the 1950s brought an influx of Chinese settlers, overwhelming the indigenous population in certain areas, the same is happening in Tibet, marginalizing the Tibetan population still further. Accounts in this report show how the railroad is increasingly being used for trade purposes, and that Chinese migrant workers are traveling to Lhasa by the train in order to find employment and often to settle in Tibetan areas.

Lhasa’s population boom began in the 1980s and is undergoing a further expansion with the coming of the railroad. News of a further and dramatic expansion of Lhasa in the area where the station was built, known as Liuwu New District (Tibetan: *Ne’u*), was reported in the official press in November 2007. The reports announce that the Lhasa City area will expand by more than 60% through the establishment of this urban

district, which will accommodate 110,000 residents.⁶ The new district will expand Lhasa city from its current 60 square km to 100 square km, according to Xinhua, which stated: “In recent years in the wake of the state’s western development strategy, Lhasa has been on a ‘fast track’ of economic and social development, in particular since the opening of the Qinghai-Tibet railroad last year. As a terminal city for the Qinghai-Tibet railroad, a new golden period of development is being welcomed.”⁷ Liuwu New District is reportedly to be used as a “reception and distribution area” for new arrivals to the city, as well as having a “high-tech zone” and a botanical garden.⁸

This new development is in line with — and may even be more ambitious than — proposals outlined in the Party’s Tenth Five Year Plan (2001–2005) to more than quadruple the area of urban Lhasa from its current 53 square km to 272 square km by 2015. In June 2001, an official report stated that the Liuwu New Area, in Toelung Dechen County (Chinese: Duilong Deqing), on the bank of the Kyichu (Lhasa) River, and “a 12.5 square km development zone” will “become the pioneers of economic development of Lhasa and even the whole autonomous region.”⁹

Unusually, when describing the new developments, the official press noted concerns by a Tibetan NGO representative, who reportedly said Lhasa was at risk of “losing its unique character”. These concerns were rejected by a government official in the same article, saying that the buildings in the Liuwu New Area would feature “Tibetan icons”. The article continued: “The Lhasa River Bridge completed this year, for example, resembles a white lotus, a Tibetan symbol of good luck, and its main pier and the supportive piers are like the muscular legs of yaks, one of the most popular plateau species. [...] Many stations along the Qinghai-Tibet railroad, which opened last year, are white, red or yellow, all colors featured in Tibetan Buddhism.”¹⁰

The Lhasa station compound was built on the site of the village of Ne’u, which was demolished to make way for the construction, and the families living there were relocated.¹¹ According to reports received by ICT, the villagers did not have a choice about relocation and lost their farms and family fields; only some received a limited amount of compensation. Although some of the young villagers asked for work at the construction site, only a few locals were employed, mainly for unskilled work such as cleaning, security and heavy manual labor. The relocations reflect an official policy that regards any kind of incorporation of rural Tibetans into the urban cash economy as an improvement. Rural development, in the sense of improving existing rural livelihood distinct from the urban economy, is not on the agenda. Migrants with capital, experience and contacts in the mainland economy are therefore going to benefit more from these policies than rural Tibetans.

A Tibetan monk from a farming family in the TAR who is now in exile told ICT that swathes of pastureland owned by Tibetan nomads and villagers had been appropriated by the authorities to make way for the railway. “Both county and village officials told us that that we had the rights to cultivate the land, but that does not mean that the cultivators owned the land. Citizens are required to return the land to the government whenever the state needs it back. We could not say or do anything against them because our opinions or suggestions would be interpreted as being politically motivated. Therefore we had to tolerate whatever the officials imposed on us.”

The rate of population increase during the 1990s in Lhasa was about five times the officially claimed national average of 1.07%,¹² and is almost certain to be far higher following the completion of the railroad.¹³

Actual population statistics are invariably higher than official statistics. Chinese official regional census data do not include the military or the ‘floating population’ of economic migrants. Based on the 2000 Chinese census, the total population of the officially designated Tibetan autonomous areas of the PRC was 7.3 million, of whom 5.0 million were Tibetans.

The boom in tourism and real estate in Lhasa has also led to an influx in Chinese investors taking advantage of the easier access to Lhasa.¹⁴ The authorities are encouraging this process; there are favorable policies in Tibet’s real estate sector compared to the interior. One international Chinese business web portal quoted the short-term loan rate up to five years at 2.79% and the long-term rate at 3.06% — rates far below those in the interior.¹⁵ Tibetan sources report that there is a pattern now of Chinese businesspeople and traders staying in Lhasa throughout the year with just one trip home for China’s important Spring Festival.

Tibetans describe the rail-borne influx of Chinese as a “second invasion of Tibet”.¹⁶ An example of the black humor circulating in Lhasa soon after the opening of the railroad in summer 2006 was that China stole Tibet, and now Chinese thieves were coming on the train to steal what was left. (See ‘Perspectives: Black humor from Lhasa’, p. 208.) One vivid account described the crowds descending on the city since the railroad was completed as “a plague of locusts”, adding that: “It feels as though the city’s going to burst; prices for food are getting more and more expensive on the market, with 16 *yuan* [US \$2.15] for a half-kilo of yak meat and 17 *yuan* [US \$2.29] for a half kilo of butter; going to the temple to pray, it’s hard to move through the mass of tourists, and furthermore the tourists speak so loudly, they spit on the ground and the men smoke and the women bare their flesh; go to a shop or a restaurant and the owners ignore the locals, with the Han just looking out for the Han, and Tibetans truly becoming marginalized.”¹⁷

Migration as part of the Western Development Strategy

Relevant statistical information on in-migration to Tibet is generally not published, and it is not known with any certainty whether it is even compiled. In the 1990 national census for instance, statistics on out-migration from the Tibet Autonomous Region (TAR) were published but statistics for in-migration were not.¹⁸ There are numerous studies on patterns of migration within the PRC which explicitly forego analysis of the TAR on the grounds that no official data is available.

It has nevertheless been made clear in various official statements that China's Western Development Strategy actively encourages China's professionals, experts and workers to go with their families to "develop and pioneer in ethnic autonomous areas", a phrase which is enshrined in legislation as a part of the Regional Ethnic Autonomy Law (REAL).¹⁹

This is a contrast to the situation in China, where the migration of people to cities and other areas is actively discouraged by means of a system of residency registration, which forces people not in their home areas to pay far higher prices for services such as health and education. In Tibet, amendments to the REAL made in 2001 added language to the original 1984 REAL on the recruiting of cadres, professionals and workers for development of the western regions of the PRC. The amended REAL provides the basis for providing incentives for population movement into autonomous areas where Tibetans and other groups live: it authorizes local autonomous governments to provide "preferential treatment and encouragement" to "specialized personnel joining in the various kinds of construction in these areas."²⁰

Minister Li Dezhu of the State Ethnic Affairs Commission said soon after the announcement of the Western Development Strategy that a "two-way population flow" was inevitable once the effects of the state's investment in the western regions of the PRC became apparent to human "talent". He even warned that increased population flows could bring about "some changes in the proportions of the nationalities" which would cause "conflicts and clashes" if not handled correctly.²¹

A Chinese scholar, Ma Rong from Beijing University, has also pointed out that the trend of using migrant labor within centrally managed development strategies in the western regions of the PRC, coupled with neglecting to provide adequate education and training opportunities for the local indigenous peoples, will mean that ethnic peoples will "face serious challenges due to their disadvantages in education," and that ethnic tensions arising as a result could be a "fatal threat to the success" of the Western Development Strategy.²²

Official acknowledgments of the extent of the influx of Chinese into Tibet are rare, although anecdotal accounts occasionally appear in the state-run media. For instance, in May 2001 a Chinese journalist wrote, “I remember the first time I went to Tibet 10 years ago, the majority of Han comrades you saw on the streets were [...] cadres [...] or tourists. These days, the tide of the market economy has washed a large batch of ‘temporary workers’ up onto the plateau”.²³ And even in Ngari (Chinese: Ali), a vast and largely desolate area in the west of the TAR with barely one person per 20 square km, it was reported in the Chinese press in 2000 that “More and more migrant workers are braving the cold and the lack of oxygen and enlivening the once-tranquil mountains and valleys by working for money.”²⁴

Although migration to Tibetan areas is explicitly encouraged in China’s development strategies, senior officials in the TAR still try to deny the scale of migration from the Chinese mainland. For instance, Wu Yingjie, a Vice Chairman of the TAR government, said “Tibet’s unique natural conditions make it impossible for the Han people and other ethnic groups to settle down here.”²⁵ More recently, Jampa Phuntsog, Chairman of the TAR government, said that Tibetans did not face assimilation into Chinese culture.²⁶

But since the opening of the railroad to Lhasa, the official Chinese press is reporting more unequivocally the speculation that there has been a significant rise in the non-Tibetan population of Lhasa.²⁷ An article published in Sichuan Province in July 2007 reported, “According to someone who has worked in Lhasa for many years, following the opening of the Qinghai-Tibet railroad the population of outsiders has gradually become more than half of Lhasa City’s total population.” The article claims that at least 100,000 migrant workers from Sichuan are in Lhasa, which has a registered urban population of 270,000 people — many if not most of whom are also Chinese — and that the Sichuan dialect is now the language most commonly heard in the city. Lhasa is described in the article as the “back yard” of Chengdu, Sichuan’s provincial capital. The July 2007 article continues, “There isn’t any official data which can prove it yet, but it can definitely be confirmed that many of the Sichuanese who came to Lhasa [since the railroad opened] have chosen to stay.”²⁸

This is due in part to the high levels of unemployment in Sichuan, an inland province that borders the TAR. The Sichuan basin is overcrowded and unable to sustain its tens of millions of peasant farmers. Many of Sichuan’s unemployed drift to Tibetan areas, thus displacing Tibetans in the labor market.

Amid explicit concerns about unemployment among Tibetans, the TAR Labor and Social Security Bureau estimated in May 2007 that 20,000 to 30,000 Tibetan herders

and farmers are leaving the land each year and are therefore in need of work. This compares with the bureau's forecast of 200,000 to 300,000 people arriving each year on the train in search of work.²⁹

PERSPECTIVES: A SENSE OF DESPERATION AND A CLIMATE OF FEAR — LHASA AND THE OPENING OF THE RAILROAD

A Tibetan who lives in the West visited Tibet when the railroad opened in July 2006. He gave ICT the following account:

“The railroad is not inherently bad; in fact, if the Tibetans were the ones who could make the decisions about how the railroad would and would not be used, it could be a good thing. But Tibetans are powerless to affect the Chinese government's economic, political and demographic policies in Tibet, and the railroad is an example *par excellence*.

Tibetans I spoke with view the railroad as a tool for the destruction of their country. They fear that Tibet will be even more flooded with Chinese — not only those who would take away Tibetans' jobs but also ‘undesirables’, like thieves, con-artists, beggars, and so on. People warned one another that they needed to be careful to secure their homes once the train came. One joke circulating was that China stole Tibet, and now Chinese thieves were coming on the train to steal what Tibetans had remaining.

The Chinese government claims that the railroad is bringing more development and tourism to Tibet. This is true, but the economic gains go overwhelmingly to the Chinese. Chinese tourists come in the thousands in Chinese-owned planes, trains and buses, stay at Chinese-owned hotels, eat in Chinese-owned restaurants and buy from Chinese-owned businesses. Even street vendors are mostly Chinese, and increasing numbers of Chinese tour guides, who usually speak no Tibetan, unabashedly give the Chinese government-approved — what Tibetans call ‘false’ — version of Tibetan history.

What the Tibetans mostly ‘gained’ since the train opened are higher prices (the cost of food shot up due to more people), traffic jams and crowds in cities, and increasingly, air pollution. Some middle class Tibetans are indeed taking advantage of traveling by train to China, as are Tibetan students who study in China. They say it is cheaper than flying and more comfortable than the bus. Such people have learnt



The Chinese government hopes that political ‘stability’ will be achieved through a rise in living standards in Tibet, a belief that emerges from the view that if Tibetans become richer, their ‘ethnic distinctiveness’ will diminish and their faith in religion and the Dalai Lama will lessen. This has not been reflected in the reality in Tibet. Tibetans still take great risks to demonstrate their allegiance to the Dalai Lama, as seen in this image of the triumvirate of the Dalai Lama, with the late 10th Panchen Lama and the current (17th) Karmapa, pictured in the window of a taxi cab in Jyekundo (Chinese: Yushu), in Amdo, now part of Qinghai Province. Tibetans can face detention and imprisonment or other punishments for displaying images of the Dalai Lama. IMAGE: ROBERT BARNETT.

how to live under the Chinese and since they can’t do anything about it, they make the best of it, like they do with many other things under present circumstances.

‘THE GOVERNMENT WAS THANKING ITSELF FOR ITS BENEVOLENCE’

The days immediately before the train arrived, Tibetan homes and shops were required to fly Chinese flags and a lot of uniform banners were put up celebrating the train, about which I heard sarcastic remarks along the lines of ‘the government is thanking itself for its benevolence.’ Many troops and police were deployed, and I saw trucks full of soldiers with rifles and even a ‘sound cannon’ crowd-control device — but people did not seem to react with surprise, as if they were used to this sort of display of force and intimidation.

No one seemed to know about specific celebrations, who was invited and whether the public was allowed near the train station on the opening day. The day of the train’s arrival, the crowd wasn’t that large and there were few Tibetans (who were

probably afraid in case it wasn't allowed). Most seemed to be Han and Hui Chinese.

In general, there appears to be a sense of desperation that the flood of Chinese cannot be stopped and Tibetans will become even more marginalized, and not just the Tibetans who are under-educated and/or unable to speak Chinese, but also the relatively more well-off ones as well. There is a general fear that soon, everything will be controlled by Chinese and Tibetans will lose even the few shops they currently own. There is also a realization that to speak out on this issue would be seen as expressing 'separatist' thoughts, and it is therefore very dangerous to talk about this issue with people one does not know and trust."

'Fortune hunters' in Tibet

Statistics on the total number of migrant workers throughout the PRC are by their very nature difficult to compile. However, a report in 2003 in China's official press estimated that 113.9 million people had left rural areas in search of work, and that "China has another 150 million surplus rural work force, potentially to fuel the flow" of people leaving the countryside for the cities.³⁰ This movement of rural people to the urban areas of China is regarded as the largest population movement that has ever taken place worldwide.

For many migrant workers in the PRC, the sole reason for leaving their home areas and embarking on often long and uncertain journeys is simply to make whatever they can above a mere subsistence living.

Whereas many of China's migrant workers used to go to China's thriving eastern seaboard in search of work, there is now evidence that more people are choosing to head west instead, including into Tibet, to take advantage of opportunities which have arisen as a result of the Western Development Strategy. For instance, a February 2007 press report suggested that migrant workers are heading west on hearing that there are more opportunities,³¹ and most importantly as far as migrant workers are concerned, upon hearing that wages are generally paid more reliably in Tibet than elsewhere in the PRC.³² According to official government statistics, certain privileged staff and workers are now among the highest-paid in all of China.³³

Even the physical discomfort of living and working at altitude become a negligible concern for migrant laborers. A Chinese journalist's conversation with a migrant worker on a railroad platform in Nanning, the provincial capital of Guangxi Zhuang

Autonomous Region, gives an insight into the thoughts of one family when deciding where to go to try and make a living:

Q: "Where are you getting ready to travel to?"

A: "From Chengdu we'll change trains and go to Tibet to find work."

Q: "Where are you from? Why do you have to go to Tibet to find work?"

A: "It's all just rocks and mountains where we live. We couldn't make enough eat there, so it was better to leave and find work."

Q: "What made you think of going to Tibet to find work? Can you take it physically?"

A: "An acquaintance told me about it and so I went last year. This time I waited until after the new year to go back and take my wife and child. There are many people who can't physically adapt when they go, but I've been okay."

Q: "What work do you do there?"

A: "Building site work. My wife has done cooking work on building sites before."³⁴

For many people from the Chinese interior, the new railroad line to Lhasa provides just one more option for them to consider when looking for opportunities to make a subsistence living. A press report during the 2007 Spring Festival (traditionally a time to go home and celebrate with one's family) revealed one family's motive for going to Lhasa to find work. A woman from Chongqing who was awaiting the train to Lhasa with her husband on a platform in Chengdu explained that they weren't going home for the new year like everyone else, but instead were going to explore opportunities to earn money in Lhasa. With the train having gone into operation only the year before, the couple surmised, migrant laborers already in Lhasa would be going home for the holidays, leaving a shortage of labor. The press report explained, "She and her husband planned to go to Lhasa and try their luck."³⁵

For other migrants from the Chinese interior, choosing to go to Tibet to find work appears to be a far more strategic decision, based on the existence of a social or family network already there. For instance, according to press reports in the Chinese media, there is a large contingent of people from a single county in Chongqing. "Currently, there are more than 10,000 people from Tongnan County working in Tibet, and there are four or five thousand from Baizi Township alone," according to one report.³⁶

Reports in the Chinese media on people going to Tibet in search of work are often a comment on the financial benefits that are available to those willing to look for them. For instance, the same press report which claimed 10,000 people from Tongnan County alone are in Tibet added: "The wages brought home by these workers each year amount to more than 200 million *yuan* [US \$26 million]," and notes also that a couple of dozen

people had driven home from Tibet for the Spring Festival in luxury cars costing more than 1 million *yuan* (US \$133,000), paid for with the proceeds of their entrepreneurial activities in Tibet.

Chongqing, where the people mentioned above largely come from, is a huge metropolis — the biggest in the world by some indicators — with a rapidly growing population which was already in excess of 30 million people by 2005. Yet still Chinese people are choosing to leave this economically thriving center of China's interior to seek opportunity in Tibet — a strong indication that the railroad will be a conduit for many more 'fortune hunters'.

Large numbers of people from the Chinese interior were drawn to Tibet to work on construction of the railroad, work carried out by Chinese state-owned companies. While some migrant workers left after construction of the railroad, many others stayed to pursue opportunities created by the new infrastructure. According to Tibetans from Qinghai, a similar pattern was evident when the railroad was extended from Xining to Golmud (work began on the route in 1958 and concluded in 1984). Local officials apparently claimed that the opening of the station and route would benefit local Tibetans, but they became further marginalized because of competition from incoming Chinese migrants.

A Tibetan in his twenties from Xining who is now living in exile told ICT: "My family lives on the other side of river from the Xining train station in Qinghai. But among the thousands of officials, I knew of only one Tibetan official who worked at this huge rail station. Outside the station, there are still a lot of opportunities, for instance, hotels, restaurants, shops, and transportation, but in my experience there were no Tibetans running these businesses. The situation in the railroad stations along the line is very similar — there are only few Tibetan people employed, and all businesses are run by new Chinese immigrants."

The development of a large logistics center in Nagchu (Chinese: Naqu) in the TAR for the railroad is also likely to lead to an influx of Chinese workers. (See 'A golden path to prosperity? The political and economic significance of the 'Sky Train' to China's rise and to Tibet', p. 9.) Already there has been a demand for workers with skills in transport management operations. In 2002, Nagchu Communist Party Secretary Gonpo Tashi was reported as saying that the government had approved a plan to form 25 new townships, many of them along the railroad line.³⁷ The same report by the Tibetan Government in Exile (TGiE) stated: "Nagchu is already filled with Chinese restaurants, shops, karaoke bars and brothels (often disguised as hairdresser's shops) to cater to the

mostly Chinese drivers who ply the road to Lhasa. Officials also say it is home to a floating population of nearly 100,000 unregistered migrants, mainly Chinese. Now that the railway is running, Nagchu and other major Tibetan towns will be flooded with Chinese at an even greater rate than before.”

According to respondents to a survey among taxi-drivers conducted in Lhasa by scholars at a Chinese university — referred to in more detail below — the average time period taxi-drivers intend to stay in the city before returning home is three years and two months. However, the researchers added that of all the questions they asked, this particular question drew the fewest number of responses, indicating a high degree of uncertainty about future plans and intentions among this particular group of migrant workers.³⁸

Some Tibetans have commented to ICT that the increasing ethnic and social divisions in Tibetan urban areas have strengthened Tibetans’ determination to protect their distinct identity. Harvard-based scholar Lobsang Sangay says: “The continued migration of Han Chinese into Tibet has intensified the sense of separate identity among Tibetans, creating an increasingly overt feeling of ‘us versus them’. In almost all the Tibetan areas, conceptual and physical separation of the two groups has created two separate worlds. In their everyday lives in most of the inner towns and cities of Tibet, Tibetans work and live in physically segregated areas. Consequently, while the number of Chinese moving to inner urban Tibet has dramatically increased, the conceptual and physical separations between the two populations foster a strong desire in Tibetans to resist ethnic assimilation.”³⁹

PERSPECTIVES: ‘THE CHINESE ARE LYING TO THE WORLD; THE RAILROAD AS A SOURCE OF SORROW’

A Tibetan in his twenties with a professional post in Lhasa shared his views on the railroad with ICT, saying that despite Chinese propaganda, most Tibetans in Lhasa do not welcome the railroad. In this account, he discusses several journeys he has made to Beijing and back on the train.

“Almost all of the passengers in the trains we traveled on were Chinese. I believe that while some of them were returning home after visiting Tibet, most of them were going to settle in Lhasa or other areas of Tibet, either through starting a business or finding work, because they are the Chinese *baogong dui* [contracted workers, as opposed to migrant workers traveling to Tibet to see what they can find]. Many of

them would stay for a while, then return home — and come back again with their entire families as well as relatives and stay in Tibet permanently.

There is little benefit from the railroad to Tibetan people. The only Tibetans it can benefit are the traders, but that matters little if you look at the bigger picture of the benefits to Chinese in terms of business and employment. From the beginning, the railroad was certainly not considered and built for the Tibetans' benefit; it was built for the profit of the Chinese themselves. The Chinese come out with all this propaganda about how significant the railroad is, how it leads to progress for the Tibetan people, how Tibetan people have already seen the benefits and they are obviously happy to have the railroad. They recite all of this like monks chanting their prayers every day. I think the Chinese ought to say the real reasons why they built the Qinghai-Tibet railroad. But they have to lie to the world.

I have personally witnessed what is happening in Tibet, especially in Lhasa, since the coming of the railroad. Seventy percent of Lhasa city is filled with Chinese migrants and most of the shops, restaurants and hotels are now owned by Chinese — an illustration of how quickly Tibetans are losing all their opportunities and livelihoods.

Just before I left Tibet, I met an old man from a peasant family near Lhasa. He came to Lhasa for trade. We got talking and I asked him what he thought about the impact of the railroad. He became very upset and said: 'My daughter used to own a traditional Tibetan tailoring shop in Lhasa, and her business was going well but then since the railroad reached Lhasa it's bringing thousands of Chinese every day. The Chinese people who come in are importing their own clothes and products and most people are interested in purchasing the Chinese ones rather than Tibetan ones. Even Tibetan youngsters prefer to buy Chinese clothes these days, and wear traditional Tibetan clothes only during holidays such as New Year. So my daughter had to close her shop and now has no income.' This is just one example; many Tibetans lost their livelihoods after the coming of the railroad and many farmers have lost their farmland.

It's officially reported that an average of 4000 to 5000 Chinese tourists visit Lhasa every day on the train.⁴⁹ If this is the case, people might think there should be some benefit to the Tibetan people, as they would be sure to spend some money in Tibetan hotels and so on. But in reality more than half of this number are not tourists at all, they are Chinese who don't have life insurance, the unemployed, beggars and thieves who are coming to Tibet to live.

The Chinese also report that many overseas visitors travel to Tibet and bring positive benefits to Tibetans.⁴¹ But everything the overseas tourists spend goes directly into the hands of the Chinese government. And so in my view for the Tibetan people, the railroad is a source of sorrow and they are not benefiting from it so far.”

The process of exclusion

A phenomenon which appears to be rapidly taking hold in Lhasa and throughout Tibet is the preponderance of family and business ties between sometimes large networks of people from the Chinese interior, who then come to dominate a certain sector of the economy in Tibet. A prime example of this is the taxi industry in Lhasa. A 2005 study conducted by scholars at a Chinese university found that just under 99% of taxi drivers in the city were non-Tibetans. Although the taxi industry in the city did not truly develop until the mid-1990s, the trade soon became dominated by Chinese migrants primarily because of the strong social networks established by settlers from the Chinese interior, and also because those settlers had better access to funds, and were better positioned to avoid financial risk.⁴²

The authors of the study — which is an extremely rare and detailed insight into how society in Tibet is ethnically structured — stress the importance of their work for understanding current and future trends in the economic development of Tibet, noting that other industries and sectors are already developing in similar ways to the taxi industry.

The same phenomenon can certainly be seen along the Barkhor in Lhasa, the route surrounding the Jokhang temple in the center of Lhasa's old quarter and a sacred path for pilgrims circumambulating the temple. All along the route of the Barkhor, buildings have been turned into retail outlets selling Tibetan religious items and other distinctly Tibetan pieces to the throngs of tourists. By some accounts, none of these shops has been owned or run by Tibetans for a decade or so; they are instead owned and run by Han Chinese from the Chinese interior or Hui Muslims from Qinghai and Ningxia Provinces, and even their stock of ‘Tibetan’ goods is made in the Chinese interior.

The family and business networks among Han and Hui settlers in Lhasa, which effectively exclude Tibetans from significant participation in the economy, are replicated throughout all economic activities in Tibet. In the mining and infrastructure sectors, discussed in more detail elsewhere in this report, non-Tibetan administrators and government officials generally approve non-Tibetan capital to be invested in projects



This image, provided by a visitor to Tibet, depicts a military training exercise in a remote rural area outside Lhasa. The banners mounted above the trucks on the left read "Military training convoy". There has been a stepping up of military readiness on the Tibetan plateau coinciding with the construction of the railroad. IMAGE PROVIDED BY A VISITOR TO THE AREA.

which often exclusively employ non-Tibetan staff for ventures which are intended to benefit non-Tibetan interests.

Cadres, government appointments, and the military

The Chinese authorities are actively training and recruiting personnel from the Chinese mainland to take on positions in the TAR's administrative structures and in its state-owned enterprises. According to Human Rights Watch, at present, there are fewer Tibetans in Lhasa's municipal administration than at any time since 1966.⁴³

Party and government personnel as well as technicians posted to Tibet from the Chinese interior are usually enticed with various bonuses, such as significantly higher wages, higher pensions upon retirement, and for some technical personnel, the promise of much sought-after urban residency permits for their children.⁴⁴

Chinese professionals are trained not only for key government posts, but also for positions at the township level. In recent years, the Chinese press has announced the voluntary appointment of thousands of Chinese university graduates to the western areas of China, including Tibet, to work on sanitation, health, agricultural and other projects. Some of the Chinese cadres study the Tibetan language at Tibet University in Lhasa, and these young professionals are often appointed to senior positions under the current China-wide policy of urbanizing rural areas, which involves the aggregation of smaller townships into larger administrative units. Townships (Chinese: *xiang*) which are near or adjoining an existing town, or which are already a small town (Chinese: *zhen*), are being combined with neighboring townships and renamed as one administrative entity.⁴⁵

This nationwide policy is resulting in the development of new commercial and industrial areas adjoining existing towns, with many new roadside towns. The widespread development of these new urban areas is becoming the vehicle through which mainland settlers are moving out of the cities. This is because residents of these settlements can no longer survive by traditional rural livelihood alone such as farming or herding, and are obliged to seek income from opening shops, transport businesses, or cultivating cash crops. New towns and villages created through these policies are equally accessible to new migrants, who are generally able to thrive better there than locals.

The voluntary transfer of Chinese cadres to Tibetan areas reflects the authorities' aim to attract skilled personnel into the region as part of the ongoing implementation of far-reaching policies to develop China's western regions.

The ongoing reform of the household registration system in China is likely to accelerate the movement of Chinese workers, both skilled and unskilled, and college and university graduates to live and work in Tibetan areas. China is one of the few countries that practice residency registration, which requires people to transfer their registered residence whenever they change their residence. The regulations have been adapted to serve the Western Development Strategy: the authorities allow Chinese people to go to work in the west and have residency there if they wish, while retaining residency in their home area so they can return if necessary.

This is effectively the opposite of the regional autonomy measures originally envisaged for Tibet in the 1950s and re-asserted by prominent reformer, the late Hu Yaobang, in the 1980s.⁴⁶ The issue of rights of settlement and ownership for non-residents would be a critical issue in any debate over what constitutes 'genuine autonomy' for Tibetan areas of the PRC.

In practice, obtaining residency in the western regions, where the authorities want to encourage workers to settle, is likely to be easier than in cities like Beijing. But the new regulations also make it easier for Chinese workers to settle permanently in Tibetan areas; and investors and students can obtain permanent resident status after three years residency, according to regulations made public in October 2000. This could have long-term consequences for the ethnic balance of Tibetan areas.

The numbers of Chinese military stationed in Tibet are not acknowledged in any official population statistics. However, there is certainly a large and visible Chinese military presence in Tibet — particularly evident around Lhasa — although it is difficult to know with any degree of certainty what kind of a drain this presence is, for example, on local resources.

The railroad has enormous potential for military applications, whether for reinforcing China's military control of Tibet itself or for further projecting China's military reach beyond the current limits. In addition to being a far more reliable supply route for the military already stationed in Tibet, according to one expert, fully 12 divisions of infantry — 3000 soldiers in each, plus their equipment — could be moved into Tibet within 30 days now that the railroad is in operation.⁴⁷ The opening of the railroad gives reason to anticipate the Tibetan plateau will be permanently and heavily militarized; and according to one military analyst, the line has provided “previously unrealized strategic, tactical and conventional possibilities for the [Chinese] People's Liberation Army to direct military firepower towards South Asia and beyond.”⁴⁸

Railroads and migration in the PRC

Mass migration into isolated regions after railroad construction follows a pattern seen elsewhere in China in the past century. For instance, the Han Chinese population of Inner Mongolia increased five-fold after the completion of a railroad from Zhangjiakou to Hohhot between 1912 and 1949. By 1949, Han Chinese outnumbered Mongolians 11 to one.

The same occurred in Manchuria with the help of railroads built by the Japanese, who seized that region in 1931. Urumchi, the capital of Xinjiang Uyghur Autonomous Region (XUAR) to the north of Tibet, is a predominantly Chinese city even though the province is home to the indigenous Uyghurs who, like the Tibetans, have been struggling to maintain their culture. In Kashgar, a vibrant center of Islamic culture in Xinjiang — widely referred to as East Turkistan by the local non-Chinese population — the

Chinese population increased by at least 30% in 2001, the year after the railroad there was completed.

The extension of the railroad line from Urumchi to Kashgar set a disturbing precedent for the railroad from Golmud to Lhasa. It transformed the desert oasis town and led to increasing despair among many of the indigenous Uyghur population. The rail link to Kashgar opened in autumn 1999 for the transportation of goods, and passengers began to travel on the railroad in 2000, during the period when the TAR's current Party Secretary Zhang Qingli held a senior post in the province. The 1000 km journey from Urumchi to Kashgar takes about 24 hours.

The opening of the rail link had an immediate impact on the number of people, particularly Chinese migrants, coming to Kashgar, which was once an oasis town on the Silk Road. To create the railroad station, houses and shops — mainly belonging to Uyghurs — were demolished, with the result that many people, including those who had small stalls by the station building, lost their livelihoods. Many other Uyghurs lost their jobs transporting goods by road, as goods are now transported by rail. A Uyghur expert currently living in the West told ICT: "The government says that the railroad will help the economic development of East Turkistan, but it is further endangering the survival of Uyghur Muslim culture and identity in the region. The Uyghur people, who are already facing increasing pressure to survive due to the numbers of Chinese migrants arriving in the region, are simply unable to compete and to participate in the development of their own economy."

Xinjiang and Mongolia are at a much lower altitude than the Tibetan plateau, and the climate and geographic conditions in Tibet were never as amenable to the requirements of the Chinese authorities as those in Mongolia and Xinjiang. For instance, grasslands in Tibet cannot be ploughed to grow food for a large workforce, and physical labor can be extremely uncomfortable for people who are not accustomed to the thin air on the plateau.

Now, however, the Chinese authorities are creating opportunities in Tibet which are being seized by migrant laborers and settlers from the Chinese interior. The constraints that previously limited immigration of the scale seen in Mongolia and Xinjiang have been lifted. Food is now grown in poly-tunnels (green-houses made of clear plastic sheeting covering long pre-fabricated frames) or freighted on the railroad; heavy unskilled labor is performed by machine or offered to Tibetans while less strenuous and more skilled positions — electricians, carpenters and plasterers — are filled by non-Tibetans.

A senior official supervising work on the railroad, Huang Difu, admitted to a Western journalist during construction of the railroad that while 6000 Tibetan laborers were employed at the time, none of the estimated 27,000 semi-skilled workers and managers for the railroad were Tibetan. Huang Difu added that this is because most work has been sub-contracted to enterprises based elsewhere in China.⁴⁹ In a similar example, the *Shanghai Daily* reported in April 2006 that more than 200 Chinese workers, mostly from Anhui Province, were taking Tibetan language lessons in order to prepare for work on the Shanghai-Tibet route, as opposed to simply hiring Tibetans.⁵⁰

PERSPECTIVES: THE IMPACT OF MIGRATION

“With the correct policies, the railway could be good for Tibet.”

A Tibetan in his twenties from Amdo in eastern Tibet, who grew up living near the railroad in Xining and who is now living in exile, expressed the following views to ICT on the impact of the completion of the railroad to Lhasa.

“The railway was built at the same time as the excess rural labor force in China was reaching critical mass; the railway not only provided employment, it also provided a route onto the plateau which acts as a pressure valve for Chinese cities. It is very easy to see what is going to happen in Tibet by looking at Inner Mongolia.

The railway will encourage many people to come to Tibet who would otherwise have been put off by the long and arduous journey by road. The railway will also facilitate more mineral exploitation.

China’s economic policies in Tibet as a whole have been ever-changing, leading to damage and disaffection. Now, nomads are being forced off the land and onto the streets, creating a whole new set of problems for the Tibetan people to deal with.

Tibet is being ‘Sinicized’, but very unequally, as seen most often when Tibetans go to the interior. To use an example from my own experience, many people who meet me for the first time say, ‘Oh, you speak Chinese better than me!’ Should I, as someone who is losing his own culture and language, be proud of such praise? The fact is, if you want to advance your studies or get a good job, you have to know Chinese. It grieves me terribly to say that construction of the Qinghai-Tibet railway will only hasten this process of ‘Sinicization’ because the railway doesn’t just bring goods and passengers, it is also an extension of Chinese culture into Tibet.

The propaganda is all about protecting and developing Tibetan culture, but the propaganda stops on the page. Even so, with the correct policies, the railway could be good for Tibet.”

JOURNEYS: PILGRIMAGES AND TRADING POSSIBILITIES — AN ACCOUNT OF A JOURNEY FROM LHASA

A European China expert meets pilgrims and businessmen on a journey in July 2007 by train from Lhasa.

“At the station in Lhasa, I met two monks from Gansu who had arrived in the capital by train in order to make a pilgrimage to the major sacred places of central Tibet. They were the only two Tibetans I saw on the train — the majority of passengers were Chinese, and most of them did not appear to be tourists, either. The tourists I encountered were a couple of large groups of Chinese tourists (many from Beijing, Xi’an, and Tianjin), and one group of Western tourists (from Germany), but other than them, most of the passengers seemed to be workers and other professionals.

For instance, I talked to a Chinese man from Xi’an in Shanxi Province who worked in Lhasa as a salesman for a car company. Next to him was a Chinese from Hunan who also worked in Lhasa, and who was traveling to Nagchu [Chinese: Naqu] on behalf of the company he works for in Lhasa to explore market possibilities of expansion to Nagchu. Both said there is no comparison in terms of comfort and ‘civilization’ between the bus and the train, and they whole-heartedly supported the opening of the railroad.

In the ‘hard seat’ compartment, there was a small group of cadres who were on a tour of Lhasa, Shigatse [Chinese: Xigaze], and Nagchu. The train offers three types of accommodation: ‘soft sleepers’ [Chinese: *ruanwo*], ‘hard sleepers’ [Chinese: *yingwo*], and ‘hard seats’ [Chinese: *yingzuo*]. During the journey, a recorded voice told the passengers the history of the construction of the train, first in Chinese and then in English. Two digital displays at each end of the car provide information about speed, altitude, outside temperature, and destination. The train travels at an average speed of 80 km per hour.

There are different trains that leave from Lhasa. The main ones are those directed to Beijing, Shanghai, and Guangzhou. They all stop at major stations along the route, such as Nagchu, Golmud, Xining, Lanzhou and Xi’an, but none of them have



Existing main railroad lines, and towns and cities in Tibetan areas mentioned throughout this report.

intermediate stops at minor railroad stations within the TAR or Qinghai. This is left to other lines, such as the Lhasa-Xining line that in addition to major stations also stops at some minor ones, corresponding to the size and population of the villages and/ or towns along the route. There are also ‘service stops’ apparently meant to load and unload goods, provide technical assistance if necessary, and deliver or pick up any sort of material. Tibetans living in the vicinity of these service stations cannot get off nor get on the train as there are only three stations offering passenger services between Lhasa and Golmud — Damshung [Chinese: Dangxiong], Nagchu, and Amdo [Chinese: Anduo]. It’s very difficult to get a seat or a sleeper for and from Lhasa. People often have to buy tickets weeks in advance, which makes trip-planning difficult for both Tibetans and Chinese. Together with the ticket all passengers receive a ‘health declaration form’ [Chinese: *luke jiankang dengji ka*] to complete with all personal data including phone number and hand in to the station clerks before boarding. The passengers must declare they comply with the ‘regulations for traveling on the plateau’ [Chinese: *gaoyuan luxing dishi*] and that their health status allows them to travel at more than 3000 meters above sea-level.”

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- ¹ Han Hong is a Chinese singer who was born in Shigatse, Tibet. In 2006, Han Hong's song, *Heaven's Road*, praising the railroad as having a positive effect on the Tibetan people, became a hit in China.
- ² Yadong is a well-known and popular Tibetan singer from Kham.
- ³ 'Figures related to Qinghai-Tibet railroad on its one-year inauguration anniversary', *China Daily*, July 1, 2007, available at: www.chinadaily.com.cn.
- ⁴ Little specific official information is available about how many Chinese people arrive in Tibet on the railroad for purposes other than tourism. According to the latest annual report by the Congressional-Executive Commission on China (CECC), in the railway's third month of operation, in September 2006, the Director of the TAR Development and Reform Committee, Jin Shixun, provided information about the occupational categories of passengers: 60% were businesspersons, students, transient workers, traders, and individuals visiting relatives; and 40% were tourists. Jin's remark was based on 270,000 passengers over a period of approximately 75 days, or about 3600 passengers per day. If a similar proportion prevailed throughout the remainder of the first year of operation, then approximately 900,000 of the 1.5 million passengers could have been non-tourists, and hundreds of thousands of them could have been non-Tibetan business persons, workers, and traders who intended to remain for a period in the TAR. See: 2007 Annual Report of the Congressional-Executive Commission on China (CECC), p. 27, October 10, 2007, available at: www.cecc.gov.
- ⁵ 'Tibet Rail Construction Completed', *China Daily*, October 15, 2005, available at: www.chinadaily.com.cn.
- ⁶ 'Lhasa city area grows by 60%', Xinhua, November 19, 2007, available at: <http://news.xinhuanet.com>.
- ⁷ 'Liuwu New District established, great changes to Lhasa's urban map', Xinhua, November 19, 2007, available at: www.xz.xinhuanet.com.
- ⁸ Liuwu New District established, Lhasa's urban map becoming bigger [柳梧新区成立拉萨市城市地图正在变大], Xinhua, November 19, 2007, available (in Chinese) at: www.xz.xinhuanet.com.
- ⁹ 'Future Urban Development in Lhasa', Xinhua, June 4, 2001, available at: www.china.org.cn.
- ¹⁰ Source as endnote 6.
- ¹¹ For images of the area before and after the village's demolition, see ICT's report 'Political repression intensifies as Tibet railroad opens', International Campaign for Tibet, June 30, 2006, available at: www.savetibet.org.
- ¹² 'Dramatic Transformation of Lhasa Planned', *Tibet Bulletin*, Vol. 5 Issue 3, July–August 2001, available at: www.tibet.net, citing *China Daily*, March 28, 2001.
- ¹³ 'Dramatic Transformation of Lhasa Planned: New Railroad Station Announced', Tibet Information Network, June 13, 2001.
- ¹⁴ ICT's earlier report, 'Crossing the Line: China's Railroad to Lhasa, Tibet', available at: www.savetibet.org, includes a set of satellite images indicating the changes in land use in Lhasa between 1976 and 2001.
- ¹⁵ 'IT Managers' World cover story: Go to Tibet [IT经理世界封面报道: 到西藏去]', *IT Managers' World*, August 14, 2007, available (in Chinese) at: <http://it.icxo.com>. The article states that in the first six months of 2007, 300 million yuan (US \$41 million) was invested into housing property in Lhasa, and another 500 million yuan (US \$69 million) invested in commercial property.
- ¹⁶ 'Tibet railroad an "invasion" by China', *The Age*, July 5, 2006, available at: www.theage.com. The phrase "This is the second invasion of Tibet" was used by Khedroob Thondup, a nephew of the Dalai Lama.
- ¹⁷ 'The train has run for a year, Tibet on the edge of a crisis' [火车通车一年, 西藏濒临危境], July 21, 2007, Wooser, [唯色], available (in Chinese) at: www.peacehall.com.

- ¹⁸See, for example, 'National Statistics on Internal Migration in China: Comparability Problems', Ta Liu and Kam Wing Chan, *China Information*, 1 2001; vol. 15: pp. 75–113.
- ¹⁹REAL Implementing Measures, article 29: "The state encourages and supports talents of all categories and classes to develop and pioneer in ethnic autonomous areas and local government shall offer preferential and convenient working and living conditions to them. Dependents and children of cadres of Han nationality or ethnic minorities who go to work in remote, tough, and frigid ethnic autonomous areas shall enjoy special treatment in employment and schooling." The Provisions of the State Council for Implementing the REAL, issued in May 2005, promote this key strategy for developing the Western areas of the PRC. For an in-depth analysis, see the Congressional-Executive Commission on China Annual Report, Tibet: Special Focus for 2007, available at: www.cecc.gov.
- ²⁰*Ibid.*
- ²¹'The Western Development Strategy and China's ethnic problems' [西部大开发与我国民族问题], June 1, 2000, *Seeking Truth* [求是], Li Dezhu [李德洙], available (in Chinese) at: www.qsjournal.com.cn.
- ²²'Economic development, labor transference, and minority education in the west of China', Ma Rong, *Development and Society*, Volume 32, Number 2, December 2003, pp. 125–145.
- ²³"'Job-seekers' in the land of snows on the plateau' [雪域高原 "打工人"], Xinhua, May 15, 2001, available (in Chinese) at: www.people.com.cn.
- ²⁴'The tide of migrant workers deep in the mountains of the land of snows' [雪域深山打工潮], Xinhua, October 26, 2000, available (in Chinese) at: <http://202.84.17.73/society/htm/20001027/186795.htm>.
- ²⁵'Railroad won't bring influx of settlers to Tibet: official', Xinhua, July 12, 2006, available at: www.gov.cn.
- ²⁶'Tibet Official: Tibet not to be "assimilated" by Han amid huge investment', June 20, 2007, Xinhua, available at: <http://news.xinhuanet.com>.
- ²⁷There are important distinctions between migrant laborers and permanent settlers from the Chinese interior in Tibet. Migrant laborers are people whose registration and identification documentation binds them to places in the Chinese interior: they can only get access to services such as education, housing and health-care — extremely minimal though these provisions generally are in the PRC — from the place where they are registered as being resident. On the other hand, settlers from the Chinese interior in Tibet have either had their registered residency changed to a place in Tibet, or they are the children and even grandchildren of people who settled in Tibet in the immediate wake of China's invasion in 1950.
- ²⁸"'The Sichuan dialect is the common language' — 100,000 Sichuan people in Lhasa digging for gold" [“四川话就是普通话”10万川人拉萨掘金], Sichuan Online, July 4, 2007, available (in Chinese) at: www.scol.com.cn.
- ²⁹'Tibet: Why is there so much anxiety about the first group of 96 workers leaving?' [西藏: 首批 96 位外出民工缘何让人如此牵肠?], May 15, 2007, available (in Chinese) at: <http://news.xinhuanet.com>.
- ³⁰'China had 113.9 million migrant workers in 2003', *China Daily*, May 15, 2004, available at www.chinadaily.com.cn.
- ³¹'The western development strategy makes Guangxi peasants go quietly west' [西部大开发使广西民工悄然“西进”], February 27, 2007, Xinhua, available (in Chinese) at: www.gx.xinhuanet.com.
- ³²'Lhasa City's rate of clearing peasant labor wages reaches 99%' [拉萨上半年农民工工资清欠率达99%], Xinhua, August 1, 2007, available (in Chinese) at: www.tibetdaily.net.
- ³³'Asian Labor News 2005', cited in: 'Tibet: A Human Development and Environment Report', Tibetan Government in Exile, December 2007, p 77, available at: www.tibet.net.
- ³⁴Source as endnote 34.
- ³⁵'A woman migrant worker doesn't go home for the new year, but will take a bag of medicine and go and

- work in Tibet to earn money' [打工妹过年不回家 要带药去西藏打工挣钱], February 12, 2007, *Yangguang Bao* [阳光报], available (in Chinese) at: <http://xian.QQ.com>.
- ³⁶ 'Having left to earn money, workers return in Mercedes' [出门挣钱 打工仔开回大奔], July 22, 2007, *Chongqing Evening News* [重庆晚报], available (in Chinese) at: www.cqnews.net.
- ³⁷ 'Tibet: A Human Development and Environment Report', Tibetan Government in Exile, December 2007, p 81, available at: www.tibet.net.
- ³⁸ 'Survey of the floating population in Lhasa's taxi industry' [拉萨出租车行业流动人口调查], Ge Jing [葛婧] and Qu Lina [曲立娜], *N.W. Ethno-National Studies* [西北民族研究], 2007. no.1 (Total No. 52) pp. 74-107.
- ³⁹ 'Forty years of liberation and occupation', *Harvard Asia Quarterly*, vol III, no 3, Summer 1999, available at: www.asiaquarterly.com.
- ⁴⁰ There was a total of 3.6 million tourist arrivals in 2006 and the first six months of 2007, according to Xinhua (reports on June 7, 2007; July 11, 2007). There is an analysis of the figures in the 2007 Annual Report of the Congressional-Executive Commission on China (CECC), published on October 10, 2007 and available at www.cecc.gov.
- ⁴¹ According to official statistics, 154,800 foreign tourists visited the TAR in 2006. See: 'Tibet expects 6 million tourist arrivals by 2010', June 7, 2007, Xinhua, available at: <http://english.peopledaily.com.cn>.
- ⁴² *Ibid.*
- ⁴³ While the most senior government position of Chairman of the TAR is reserved by law for a Tibetan, the most senior Party position is ostensibly open to the best candidate to be appointed. However, for the almost 60 years of the Chinese Communist Party's control of government in Tibet, there has never been an ethnic Tibetan TAR Party Secretary. The historian Tsering Shakya describes this "failure [...] to nurture indigenous figures with leadership qualities [...] increasingly hard to justify." ('Leaders in Tibet', Victoria Conner and Robert Barnett, Tibet Information Network, London 1997, p. 10.)
- ⁴⁴ 'China's Cadre Transfer Policy toward Tibet in the 1980s', Huang Yasheng, *Modern China*, Vol. 21, No. 2. (Apr., 1995), pp. 184-204.
- ⁴⁵ In July, 2003, the first group of more than 70 Chinese cadres to study the Tibetan language in Lhasa graduated from Tibet University; they were sent into the townships and towns around Lhasa to serve as officials. See: 'Chinese cadres learn Tibetan and go west: the impact of urbanization', Kate Saunders, 2 October 2003, available at: www.freetibet.org.
- ⁴⁶ The death of former CCP General Secretary Hu Yaobang in April 1989 triggered a series of events which eventually led to the Tiananmen Square protests in 1989. Hu was in favor of a pragmatic policy in Tibet, seeking the withdrawal of thousands of Chinese Han cadres from the TAR following a 1980 visit to the region. He believed that Tibetans should be empowered to administer their own affairs, and famously apologized to Tibetans for the suffering they had undergone due to Party policy.
- ⁴⁷ 'Crossing the line: China's railroad to Lhasa, Tibet', International Campaign for Tibet, 2003, available at: www.savetibet.org.
- ⁴⁸ 'The Dragon in the Indian Ocean', William Triplett, Jamestown Foundation, *China Brief* Vol. 3, issue 4, February 25, 2003, available at: www.jamestown.org; cited in: 'Tracking Dissent on the High Plateau: Communications technology on the Gormo-Lhasa Railway', in Human Rights Impact Assessments for Foreign Investment Projects, International Centre for Human Rights and Democratic Development, May 2007, available at: www.dd-rd.ca.
- ⁴⁹ 'The taming of Tibet', September 15, 2003, *Business Week*, available at: www.businessweek.com.
- ⁵⁰ 'Staff preparing for Tibet-bound train', April 19, 2006, *Shanghai Daily*, available at www.shanghaidaily.com.



This new statue, entitled 'Homage to Jiang Zemin', was built near Jyekundo (Chinese: Yushu) in Qinghai Province, eastern Tibet, to mark a visit there by the then President and Party Secretary Jiang Zemin. According to the visitor who provided this image to ICT, the open hands are intended to symbolize respect for the environment, although the statue stands next to the only major road-bridge, advertising billboard and building development in the area. IMAGE: ROBERT BARNETT.

SOCIAL EXCLUSION AND CHINA'S ECONOMIC POLICIES

GOVERNMENT FINANCE channeled into Tibet continues to be targeted at urban areas and sectors where Tibetans have the hardest time competing with Chinese migrants. Opportunities created largely advantage workers and entrepreneurs with Chinese fluency, Chinese work cultures and connections to government or business networks in China.

Development economist Andrew Fischer says: “This combination in turn exacerbates inequality and the exclusionary dynamics of growth, given that the majority of Tibetans have more and more difficulty accessing the state or private networks that control the dominant sources of wealth in the economy. Therefore, the most urgent problem within these developments is what can be called ‘ethnically exclusionary growth.’”¹

Fischer and other analysts have pointed out that this does not mean that all Tibetans are excluded. According to Fischer, Tibetans on average in the Tibet Autonomous Region (TAR) have been gradually improving their economic situation. In addition to the slow rise in the average Tibetan’s real and relative incomes since 2003 — from an extremely low base — there is a small minority of Tibetans who have done particularly well in business from the advent of the railroad and Chinese economic policies, particularly those with privileged access to channels of state-subsidized wealth such as cadres and other government employees. A few are benefiting from the boom in real estate that has occurred in the TAR since the advent of the railway.

Fischer writes: “It appears to be a fact that [year by year in the TAR] Tibetans on average [...] eat more and more meat, butter and other staples; they have more and more mobile phones, motor bikes, televisions and other durable goods; and they spend more and more money on internet cafes and karaoke bars. Yet it would be surprising if this were not the case given the sheer torrent of subsidies that the central government has been spending and investing in the TAR. What is surprising is how little actually does trickle down. This situation arises precisely because of who controls the subsidies and investments (mostly the government itself along with Chinese out-of-province state-owned enterprises) and where the money is spent (mostly in urban areas or in large infrastructure projects).”²

The expansion in government administration and increased wages has contributed to an emerging ‘middle class’ of Tibetans, but these are still very much in the minority.³

Declining education and the loss of opportunity

Despite years of investment under the Western Development Strategy, the vast majority of Tibetans in Tibet are severely disadvantaged both socially and economically by the inadequate provision of education, and the gulf between the educated elite and the urban and rural poor has widened in the year since the railway was opened. Tibetans are hampered further by a lack of any meaningful access to vocational training which could prepare them to compete with migrants from the Chinese interior who seek work and opportunity in Tibet — migrants who have multiplied with the railroad.

According to the Chinese authorities' own statistics, overall illiteracy in the TAR in 2005 was 45% — close to half of the population; this figure was up slightly from 44% in 2004, indicating that the investment being poured into the TAR and other parts of Tibet is doing little, if anything, for basic education; only 11.5% of people in the TAR had any kind of secondary-level education, and that represents a deterioration from 16% in 2004.⁴ With ever more people coming in on the railway, this drop in the education provision to Tibetans does not bode well for their ability to compete with people also looking for work.

Tibetans are competing for work with people from the Chinese interior who have generally had far better access to an education than their Tibetan counterparts. For example, people from Sichuan Province which neighbors the TAR and from where many of the migrant workers in Tibet come from, had an illiteracy rate of just 6.4% in 2005.⁵

In urban Tibet, the migrant population from rural areas of the PRC is better educated than the local urban population. Everywhere else in the PRC, urban populations are 'protected' to some degree by a job market which favors their higher levels of education. In urban Tibet, however, the average female migrant worker from rural China is better educated than the average Tibetan urban male.⁶ On the question of education alone, therefore, Tibetans face an immediate disadvantage when competing for work with the migrant population in Lhasa and other cities in Tibet.

In addition, Chinese enterprises operating in Tibet almost invariably prefer to hire migrant Chinese employees, who are obviously more familiar with the Chinese work culture and Chinese practices, not to mention the Chinese language.

Education and income generation

The Chinese authorities compile statistics which stress a link between the level of an individual's education and his annual income. According to figures from the Ministry of Education published in 2006, Tibetan households where the main bread-winner is illiterate had an annual income of only 1546.43 *yuan* (US \$206); in families where the main householder is educated to lower-middle school level — implying basic literacy — the annual average income is 3762.57 *yuan* (US \$500) — more than twice that of the average illiterate householder's family; and where the level of education is above middle-school, the average annual income is reportedly 6384.41 *yuan* (US \$850) — in excess of four times more than the income of someone who is illiterate.⁷

Raw figures on the cash income of a farming family are not particularly revealing when assessing the wealth of families whose economic viability is more appropriately measured in terms of the livestock they own, for example. But the figures are useful for indicating the nature of the value placed on education by the Chinese authorities: the higher the level of one's education, the more cash income can be earned — obviously by engaging with the Chinese-run economy.

Despite official emphasis on the correlation between education and poverty reduction, education in Tibet — particularly in the TAR — has been consistently under-funded to the extent that as noted above, overall illiteracy is 45% and the number of people with a secondary education or above is actually falling. Indeed, in recent years the TAR government has spent more on running itself — the costs of administering the TAR — than is spent on either health or education in the TAR.⁸ According to a 2003 report by the UN Special Rapporteur on Education, the PRC spends only half the internationally recommended proportion of GDP on education — just 3% of GDP instead 6%.⁹

For several years the Chinese government has been pursuing a policy throughout the PRC of trying to provide nine years of compulsory education to all children. Although largely successful in the PRC's urban areas, particularly in the east, the policy has been beset with problems and setbacks in rural areas. In the TAR for example, the Chinese authorities conceded that the target date of 2007 for introducing nine years compulsory education was not attainable, and settled instead on claiming to provide six years compulsory education — the only provincial-level administration in the PRC in which nine years compulsory education is not the norm.

According to official figures, nine-year compulsory education is available in 62 out of the TAR's 73 counties, and it is reportedly due to be introduced throughout the entire

region by 2010.¹⁰ However, according to UNICEF in 2004, only 31% of children in the TAR had access to a nine-year education.¹¹

Aware of the various disadvantages and obstacles faced by Tibetan students in Tibet, the TAR government used to guarantee Tibetan graduates employment — a system which used to exist throughout all of the PRC but which remained in the TAR for several years after it had been abolished elsewhere. In October 2006, by which time the system had been abolished, there was a rare protest at Tibet University in Lhasa by Tibetan students who were angered when 100 government positions were filled by 98 Han candidates and only two Tibetan candidates, according to a reports by Radio Free Asia (RFA).¹² A later report by the Congressional-Executive Commission on China (CECC) added that in a possible concession to the Tibetan students, the total number of recruits was raised to 140, and there was an assurance of plans for a further 71 Tibetan graduates to be taken on.¹³ However, in the same report CECC added that graduates from state universities in eastern China who had taken out loans for their studies would have their repayments waived if they agreed to work in “western or remote areas” of the PRC, a situation which is further disadvantaging and marginalizing Tibetan graduates.

Some degree of proficiency in the Chinese language is an essential pre-requisite for integrating into the Chinese-run economy. Generally, it is only the Tibetan communities in eastern Tibet — close to or amalgamated into large Chinese populations, or the very few people who have a secondary education — who have any proficiency in Chinese. According to some estimates, 80% of Tibetans do not speak any Chinese.¹⁴ For the majority of Tibetans who do not speak fluent Chinese (the Tibetan and Chinese languages are fundamentally different) there remain few avenues to successful participation in the Chinese-dominated economy.

Vocational training: Too little, too late

The Chinese authorities recognize the need to provide training in Tibet in order to equip people with skills needed in the local job market. However, there is also a recognition that Tibetans are being outnumbered by migrant workers from the Chinese interior. In May 2007, an article in the official press quoted the director of the TAR Labor and Social Security Department as saying: “Every year there is an increase of 20,000 to 30,000 peasants and herders who leave the land, and with the operation of the Qinghai-Tibet railway there will be 200,000 to 300,000 people coming to Tibet each year to work.”¹⁵ (It should be noted that many of these people who ‘leave the land’ are



Although it is impossible as yet to assess the full impact of the ambitious plans to settle nomads throughout Tibetan areas of the PRC, reports from informed sources in Tibet make it clear that many young Tibetans who move to small urban areas and encampments move between unemployment and menial seasonal jobs following the loss of their livelihoods on the rangelands. This image shows a popular pastime among young and increasingly marginalized Tibetans in the settlement camps. IMAGE: ICT.

being settled in areas and in circumstances which make useless such skills as they do have, such as raising livestock and other agricultural trades.)

Evidence from the official media in the TAR suggests that what limited vocational training there is on offer serves to prepare people for menial jobs that have little prestige or prospects, such as hotel chambermaids for women and security guards for men.¹⁶ According to various sources, other kinds of vocational training, such as computer training and driving lessons, are sometimes given in order to recruit Tibetans for current projects, including construction and maintenance of the Qinghai-Tibet railroad. However, those same sources have also stressed that these vocational training programs are extremely poorly funded by government — particularly in pastoral areas where there is thought to be greater need for retraining of nomad families.

Past and present lack of opportunity for vocational training in Tibet also contributes to higher levels of migration into Tibet. Arthur Holcombe, president of the Tibet Poverty Alleviation Fund, told an audience of analysts in Washington, DC, that “Government investment since the mid 1980s has given priority to the development of infrastructure

supporting economic reforms and opening-up in urban areas. This has resulted in inadequate funds being available for rural economic and social infrastructure, including rural credit, improved basic health services and education and vocational skills training. Because Tibetans have not been provided with opportunities to learn modern skills, the government has found it expedient to encourage increasing numbers of migrants who have the skills needed for its investment projects.”

Holcombe also pointed out that economic reforms and opening up have made it more difficult for traditional Tibetan urban enterprises to compete with better funded, more experienced and lower-cost Chinese-managed enterprises in urban areas. During the same meeting, a roundtable discussion organized by the CECC, he said: “There is growing evidence of Han enterprises, which now constitute about 70% of all enterprises in Lhasa Municipality, squeezing out Tibetan enterprises even in traditional Tibetan product areas such as Tibetan clothing, furniture, painting, clothing, restaurants and dry goods and food retailing. In Lhasa today [2002], there are about 340 officially registered Han enterprises in the ‘handicraft’ sector, and only 28 Tibetan enterprises. Moreover, with the opening up of Tibet to the outside, Nepalese entrepreneurs in Tibet have recently been able to import high quality traditional jewelry and dominate the local tourist trade in this area, undermining traditional Tibetan artisan production.”¹⁷

Chodpaylhamo, a Tibetan woman in her twenties from Aba Prefecture Tibetan & Qiang Autonomous Prefecture (Chinese: Ngaba T&QAP) in western Sichuan Province — traditionally part of Amdo — writes from a personal perspective about how unusual it is for Tibetans in her area to go to school.¹⁸

“It was unusual for my parents to send me to school. Almost no one from my home area was educated, and very few people thought it was a worthwhile pursuit. When Father was a child, he had a rare chance to attend school, and he had enjoyed every minute spent in his small classroom learning how to turn the letters of the Tibetan alphabet into words and sentences. But Grandfather was afraid that success in school would mean being transferred to a far away Chinese city, and he cautioned his son not to put too much effort into his studies. Despite Father’s reticence, his teachers recognized his intelligence, and rewarded him with high scores and candies.

Grandfather’s fears grew, and one day he came to school with the news that Father’s mother was dying and he had to return home. When they returned Father found his mother in perfect health, and realized that Grandfather’s fears had gotten the best of him. His education ended forever after only one short year.

As he grew up, Father watched his friends who had continued in school get stable government jobs and enjoy the steady incomes that education had brought. While he was eking out a living for his family herding his livestock in the rain, sleet, and snow, his former schoolmates sat in warm heated offices and bought toys for their children. He always came home from his trips to town looking ashamed. Because he couldn't speak Chinese, he could not bargain with the shopkeepers when he was buying goods for our family. He did not wish the same future for his children. So as soon as his older children had learned how to care for the livestock that our family depended on, he sent us to school. When I was old enough to herd yaks alone they decided to send all of their younger children to school. I was the first to go."

The crisis in health care in Tibet

The authorities in Tibet claim that health care provision has improved greatly from the minimal and even non-existent levels available prior to the 'peaceful liberation' of Tibet in 1950. An often-repeated statistic, for instance, is that longevity among Tibetans doubled between 1951 and 2000 to 64 years.¹⁹

However, as the development economist Andrew Fischer has pointed out, this increase in longevity was about the same for all developing countries over roughly the same period, according to the World Bank; and such increases in longevity have in fact been due to general advances in treatments and the extension of basic healthcare provisions the world over. Moreover, the provision of medical treatment is regarded more as a state's fundamental obligation rather than as a form of benevolence.²⁰

Numerous other indicators suggest the PRC is far from realizing its fundamental obligations with regard to provision of health care in Tibet. For instance, infant and child mortality in Tibet, including deaths during childbirth, are so high as to make Tibet — in this respect — one of the least developed areas on earth.²¹

Common and easily-treatable conditions such as diarrhea often prove fatal in Tibet due to the unavailability of treatment and medicines. Diarrhea is responsible for 20% of infant deaths in the TAR;²² conditions resulting from iodine deficiency such as retardation and goiter are extremely prevalent and yet, even though an individual's annual requirement of iodized salt costs only five *yuan* (US \$0.67), there are still thought to be 100 million people in the PRC suffering from iodine deficiency, mainly in Tibet and the Xinjiang Uyghur Autonomous Region (XUAR).²³

Other conditions associated with extreme poverty are common throughout Tibet, including tuberculosis and even malnutrition. Some studies suggest that half of all children in Tibet are suffering from malnutrition, and that malnutrition itself contributes to numerous other conditions, including stunting and disorders of the skin and bones. According to a report published in December 2007, two thirds of Tibetan children in a sample of 2078 in the TAR were found to be suffering from rickets, a bone disease most frequently caused by vitamin D deficiency.²⁴

Other common diseases in Tibet include Kashin-Beck's disease, a painful and debilitating condition marked by swollen joints and thought to be caused by a lack of selenium in the diet. The TAR possibly has the highest rate of Hepatitis B in the PRC, estimated to be anywhere between 5% and 20%. Outbreaks of the plague are reported in Tibet, with around 26% of Tibetans living in areas where the plague is carried by livestock and wild rodents living on the Tibetan grasslands.²⁵ According to the official press, a person died of the bubonic plague in Gansu Province in September 2007.²⁶ Parts of western Gansu belong to the Tibetan region of Kham, where extensive grasslands are home to plague-carrying rodents.

Chinese officials have also noted the possibility that the railway could also enable the spread of bubonic plague. In November 2007, the Chinese Minister of Health warned that "plague prevention along the Qinghai-Tibet Railway should [...] be intensified", pointing out that Qinghai "has experienced deaths from plague over the past five years" and that the disease "could be carried further afield by the Qinghai-Tibet Railway".²⁷

The prevalence of some of these conditions in Tibet is clearly linked to poverty as well as to the lack of health care provision in Tibet due to severe under-funding — a problem which has affected all of the PRC — coupled in recent years with a precipitous rise in the cost of health care. Between 1997 and 2001, inflation in the PRC was -1.1% (deflation); whereas specific inflation in the health care sector over the same period was 60.3%,²⁸ simply pricing people out of the option of health care and treatment.

Dr Nancy Harris, who founded the Tibet Child Nutrition and Collaborative Health Project in 1993, suggests that in order to improve Tibetan children's health, a rickets education and prevention program is needed, as well as support for traditional Tibetan medicine complemented with allopathic drugs when indicated, and a health care training and delivery program. These measures should be complemented by strengthening the infrastructure and access to health services, as well as by policies aimed at reducing poverty and illiteracy.²⁹

HIV/AIDS and the railway

There are fears that the newly opened railway to Lhasa will provide a route for the spread of HIV/AIDS onto the Tibetan plateau. The number of people in the TAR with HIV/AIDS is thought to be relatively small — according to official figures there were 41 cases of people with ‘full-blown’ AIDS in June 2007, up from 30 in the previous year.³⁰ However, with the railway now in full operation, the conditions for a dramatic increase in the rates of HIV/AIDS infections are certainly present.

Prior to completion of the railway to Lhasa, the TAR was thought to be more likely to suffer a sudden increase in the rate of HIV/AIDS infections from neighboring Yunnan Province to the east or from the XUAR to the north, where intravenous drug-use is responsible for relatively high rates of infection. It was also suggested that the high numbers of travelers entering Tibet from India and Nepal might also spread the disease; however, as most of these people are pilgrims, the threat of infection from that particular demographic would seem to be low.³¹

Almost certainly, any rise in the prevalence of HIV/AIDS in Tibet will be due in no small part to the growth of the sex industry in Tibet’s cities and the cities now connected to Tibet by the railroad. For instance, the city of Xining in Qinghai Province is not only a major distribution hub for drug smuggling into China from Central Asia, but as a ‘frontier town’ on the edge of the Tibetan plateau, it is a major port of call for the large number of Chinese migrant workers making their way into Tibet in search of work.

In one analysis based on first-hand impressions of cities through which the railroad passes on its way to Lhasa, Chinese migrant workers from as far away as Henan Province gravitated by road and rail towards Golmud — where construction of the line down into Tibet started — and then moved steadily south towards Lhasa as construction of the railway continued.³²

These new transportation links into Tibet present the same opportunity for HIV/AIDS to spread that has been observed in India and in parts of Africa, where the disease has spread via commercial transportation routes, particularly highways.³³

The disease may be spread to Tibet not only by HIV-positive migrant workers, but also by a rising number of sexually active tourists vacationing in Lhasa.³⁴

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- ¹ 'Perversities of Extreme Dependence and Unequal Growth in the TAR', by Andrew Fischer, Tibet Watch Special Report August 2007, available at: www.tibetwatch.org. Fischer is a development economist researching Chinese development strategies in the 'ethnic minority' areas of western China, focusing on Tibet.
- ² *Ibid.*
- ³ For a detailed assessment of salaries paid to the middle class, see Tibet Information Network, 'Tibetans lose ground in public sector employment in the TAR', January 20, 2005.
- ⁴ Source as endnote 1.
- ⁵ *Ibid.*
- ⁶ 'Educating for exclusion in western China: the case of multi-ethnic urban centers in Qinghai', forthcoming paper by Andrew Fischer.
- ⁷ 'The story of leap-over style development in compulsory education in Tibet [西藏义务教育跨越式发展纪实]', Ministry of Education of the People's Republic of China, August 3, 2006, available (in Chinese) at: www.edu.cn.
- ⁸ Source as endnote 1.
- ⁹ 'The right to education', Report submitted by Katarina Tomasevski, Special Rapporteur on Education, Addendum, Mission to China, November 21, 2003, UN doc no. E/CN.4/2004/45/Add.1, available at www.ohchr.org.
- ¹⁰ Source as endnote 7.
- ¹¹ 'UNICEF Executive Director visits China (28 Aug–5 Sept 2004)', UNICEF, August 27, 2004, available at: www.unicef.org.
- ¹² 'Tibetans Stage Rare Public Protest in Lhasa', Radio Free Asia, November 8, 2006, available at: www.rfa.org.
- ¹³ 'Tibetan University Graduates Stage Public Protest, Allege Job Discrimination', December 15, 2006, available at: www.cecc.gov.
- ¹⁴ Source as endnote 6.
- ¹⁵ 'Tibet: Why is there so much anxiety about the first group of 96 workers leaving?' [西藏: 首批 96 位外出民工缘何让人如此牵肠?], May 15, 2007, available (in Chinese) at: <http://news.xinhuanet.com>.
- ¹⁶ 'Tibet Develops Excess Labor Training Classes for Peasants and Herders' [西藏开展农牧民剩余劳动力转移就业培训], Xinhua, April 13, 2007, available (in Chinese) at: <http://info.tibet.cn>.
- ¹⁷ 'Statement of Arthur N. Holcombe', President, Tibet Poverty Alleviation Fund at the Congressional-Executive Commission on China Staff Roundtable, Monday 10 June 2002, available at: www.cecc.gov.
- ¹⁸ Chodpaylhamo's story is featured in the book 'Heavy Earth, Golden Sky: Tibetan women speak about their lives', edited by C. Michelle Kleisath, 2007, Shem Women's Group U.S.A., available to order from <http://www.lulu.com/content/1004382>; and see also <http://shemgroup.org/>. Shem is a women's group dedicated to empowering Tibetan women and their communities through grassroots development.
- ¹⁹ See for example: 'Progress for Healthcare in Tibet', Xinhua, March 13, 2005, available at: www.china.org.cn.
- ²⁰ 'State Growth and Social Exclusion in Tibet: Challenges of Recent Economic Growth', Andrew Martin Fischer, National Institute of Asian Studies (NIAS reports no. 47), Copenhagen 2005, p. 4. See: www.niaspress.dk.
- ²¹ 'Delivery and Deficiency: Health and Health Care in Tibet', Tibet Information Network, London, 2002, p. 70.
- ²² *Ibid.*
- ²³ 'Iodine deficiency plagues Xinjiang, Tibet', Xinhua, May 20, 2007, available at: www.chinadaily.com.cn.

- ²⁴ 'Tibet's forgotten children', Dr Cesar Chelala, *Gulf Times*, December 13, 2007, available at: www.gulf-times.com, and based on the work of Dr Nancy Harris, who launched the Tibet Child Nutrition and Collaborative Health Project in 1993. At a regular press conference given by spokespeople at the Chinese Ministry of Foreign Affairs, the spokesman Qin Gang responded to a foreign journalist's question about the report's account of high infant mortality rates in Tibet by saying, "I have no interest in commenting on such a report full of lies," before criticizing the journalist for apparently asking questions about Tibet at three consecutive press conferences. See, 'Foreign Ministry Spokesperson Qin Gang's Regular Press Conference on December 18, 2007', Ministry of Foreign Affairs of the People's Republic of China, December 19, 2007, available at: www.fmprc.gov.cn.
- ²⁵ Source as endnote 3.
- ²⁶ 'China vows to strengthen rat plague prevention', Xinhua, November 20, 2007, available at: <http://news.xinhuanet.com>.
- ²⁷ *Ibid*.
- ²⁸ Source as endnote 2.
- ²⁹ See the website of The Terma Foundation at: www.terma.org.
- ³⁰ 'HIV/AIDS cases rise to 41 in Tibet', Xinhua, June 16, 2007, available at: www.chinadaily.com.cn.
- ³¹ 'Health Policy Challenges in the Tibet Autonomous Region: a December 2000 report from the US Embassy Beijing', 2000, available at: www.usembassy-china.org.cn.
- ³² 'Environmental Protection Along the Qinghai-Tibet Railway', US Embassy in China, April 2003, available at: www.usembassy-china.org.cn.
- ³³ See, for example, the work of Avert, a UK-based charity which provides HIV-awareness education and testing for sex workers and truck drivers in India and Africa. www.avert.org.
- ³⁴ 'China's sexual great leap forward', *The Observer*, November 4, 2007, available at: <http://observer.guardian.co.uk>.



A building on the arid and sandy plains outside the southern areas of Golmud in Qinghai, at the beginning of the railway line to Lhasa. This Tibetan nomad settlement camp is one of the latest such projects completed in Tibetan areas. IMAGE: ICT.

POEM**Kept at bay by modern steel**

Poem by a Tibetan writer published on a Chinese language website on February 1, 2007.

After the train stopped in Golmud
 Carriage thirteen emptied
 Leaving six Tibetans and six Han
 It feels like a special charter train
 Outside the window all is black
 A faint trace of cool leaks from the sealed edge
 This is the cold of the Qinghai-Tibet plateau
 Kept at bay by modern steel
 Train attendants ask if I need oxygen
 I shake my head and then change my mind — I want to try
 A plastic pipe is inserted into the oxygen outlet
 And a thin string of gas seeps up my nose
 This can solve symptoms of mountain sickness?
 Eight ten and the sky slowly brightens
 I see an expansive plain and rolling hills
 There's snow on the mountains, ice on the ground, and the sky is like water
 Some children call out: *De ngatso Bod kyi sacha ree!*
 (This is our Tibetan land!)



The Lhasa railway station serves as the first introduction to the city for many travelers, and it is built in a style intended to mirror that of the grandeur of the Potala Palace, the Dalai Lama's former home and headquarters of the Tibetan state. Many Tibetans are angered by what they see as the appropriation of one of Tibet's most important religious and cultural symbols. "Lhasa has become a form of theme park for domestic Chinese tourism," said the Tibetan Government in Exile in a 2007 report. "It is a government-building project that intends to display the inert jewels of Tibet set in a crown of modern Chinese institutions. Experiencing Lhasa as a domestic package tourist is akin to experiencing the ancient icons of the Tibetan Oriental traditions as interpreted by Chinese modernism." (Tibet: A Human Development and Environment Report', Department of Information and International Relations, Tibetan government in exile, December 2007.) IMAGE: ICT.

TOURISM, THE RAILROAD AND TIBETAN CULTURAL IDENTITY

“Tibet has an ancient history and a deeply profound culture offering a richness for all mankind and which are an important constituent of today’s global culture.”

— An unnamed Tibetan intellectual in Lhasa,
writing on a Chinese language website in April 2007

“When you get to Tibet [...] many of the masses will receive you into their own homes, and you’ll eat in their homes, stay in their homes, they will dance for you, you will sing with them, you will drink chang with them, and they will give you hada [khatag, a traditional Tibetan greeting scarf]. Altogether, such a day of eating, transport and accommodation will cost 100 yuan at the most. This not only enriches the ordinary people, it also provides a convenient service to the tourist.” [On stopping in on a nomadic family during a tour of Ngari in the far west of the TAR and communicating with the head of the family:] *“I couldn’t understand too much of what he said, but the translator said that his family’s living conditions were very good. He used hand signals to say ‘the Communist Party is a Bodhisattva and we will be eternally grateful.’”*

— Zhang Qingli, TAR Party Secretary,
commenting on the joys of tourism in Tibet

Summary

ACCCELERATED DEVELOPMENT under the Western Development Strategy, and in particular, the advent of the railroad and the resulting increase in tourism, have heightened concerns for the survival of Tibetan culture and religion, already under threat as a result of hard-line policies imposed by Beijing.²

While the Chinese authorities are marketing Tibet as a tourist destination based on the ‘exotic’, spiritual attractions of its Buddhist culture and landscape, Beijing has tightened its control over Tibetan religious expression and practice. Tibetan Buddhism continues to be an integral element of Tibetan identity and Tibetan nationalism, and is therefore perceived as a potential threat to the authority of the state and ‘unity’ of the PRC. The authorities’ commodification of Tibetan culture and promotion of ‘Tibet chic’ coincides with a trend towards increasing repression of Tibetan cultural identity. The replacement of Tibetan tour guides with Chinese guides is just one example of

how the authorities block Tibetans interpreting their culture to visitors and the outside world.

Tourism hit a record high in Tibet in 2007, with just over 4 million visitors in 2007, an increase of 64% year-on-year. Chinese officials put the increase down to better marketing and improved transport links, including the controversial high-speed rail service from China.³ The authorities forecast that the TAR will receive at least 5 million tourists in 2008 — a figure that is nearly double the population of the TAR, according to Chinese statistics.⁴

The Chinese Communist Party (CCP) and government prioritizes fast-track economic development above cultural protection, and tourism is one of Tibet's 'pillar' industries. Changes in Chinese laws and regulations that address ethnic autonomy issues have tended to decrease the protection of the Tibetan language and culture, particularly since the implementation of the Western Development Strategy in 1999–2000.⁵ CCP control undercuts the practice of regional ethnic autonomy in Tibetan areas of the PRC: the state's interests come first. This means that the level of autonomy that Chinese laws and regulations provide to local Tibetan autonomous governments to protect their language, culture and religion, and to manage policy implementation on issues such as economic development and the environment, is negligible.

Tibetan culture and autonomy law

The exiled Tibetan leader, the Dalai Lama, described how the Regional Ethnic Autonomy Law (REAL) has failed Tibetans in his March 10 statement in 2007: "The problem is that [regional ethnic autonomy] is not implemented fully, and thus fails to serve its express purpose of preserving and protecting the distinct identity, culture and language of the minority nationalities. What happens on the ground is that large populations from the majority nationalities have spread in these minority regions. Therefore, the minority nationalities, instead of being able to preserve their own identity, culture and language, have no choice but to depend on the language and customs of the majority nationality in their day to day lives."⁶

In an outline of the major cultural issues linked to the Western Development Strategy, Minister Li Dezhu of the State Nationality Affairs Commission made it clear that the culture and religion of Tibetans and other 'minority nationalities' are regarded as 'problems' to be dealt with rather than as integral elements of the dynamic, shifting cultural identity. In an article published in June 2000 about the strategic objectives in 'nation-

ality work', Li Dezhu wrote: "Historically, the western region was a sensitive region for ethnic relations. [...] The religious influence of the western regions is far-reaching, and the complexity of managing ethnic relations has been increased by the intermingling of nationality and religious issues".⁷

According to the Congressional-Executive Commission on China (CECC), government policies "promote strict adherence to a national identity defined in Beijing [and] discourage Tibetan aspirations to maintain their distinctive culture and religion."⁸ In 2001, the National People's Congress (NPC) amended the REAL in order to bring the law into conformity with more recent trends in Party policy and to support the Western Development Strategy, for instance by recruiting Chinese professionals to 'go West' and prioritizing infrastructure consolidation.

The amended REAL increased state support for ethnic minority education but reduced the state's commitment to the preservation and use of ethnic minority languages such as Tibetan.⁹ A result of the amendments is that Tibetans must compete academically with Chinese who enroll in ethnic minority institutes, and compete with them for jobs after graduation. Language that authorized preferential treatment for Tibetans and other minority nationalities to compete for employment against the Chinese was also removed in the amended REAL.

Fears for the survival of Tibetan cultural identity are frequently expressed by Chinese and Tibetan intellectuals within the PRC. A researcher at the Qinghai Nationalities Research Institute told Professor David Goodman from the University of Technology, Sydney, "If it is not handled with care, the Western Development Strategy will cause complaints from local ethnic minorities who fear that they will probably be assimilated and their interests invaded."¹⁰ A Tibetan journalist told Professor Goodman: "Local people are in great danger of losing their ethnic culture, and it will be difficult to reconstruct moral values."¹¹

Tourism in Tibet since the opening of the railroad

By 2017, China will be the world's most visited country, and its promotion of Tibet as a destination, coinciding with a growing interest in Tibet and its culture among Chinese people, has reached unprecedented levels since the railway opened.

In the two months following the July 1 opening of the Qinghai-Tibet railway in 2006, more than 100,000 tourists flocked to Lhasa. In total, 2.51 million tourists visited the



Jyekundo (Chinese: Yushu) in the Amdo region – Qinghai Province. A group of Chinese tourists take pictures inside a Buddhist temple in eastern Tibet. The number of Chinese tourists visiting Tibet has increased dramatically since the opening of the Qinghai-Tibet railway and hit a record high in 2007. The commodification of Tibetan culture and promotion of ‘Tibet chic’ by the authorities coincides with an increasing trend towards the exclusion of Tibetans from speaking openly about their lives and culture. The sign on the wall reads “School moral education base, Qinghai Province Education Committee, October 1996”. The status of “Moral education base” is awarded to institutions which are recognized for – and encouraged to continue – teaching the Party line on issues such as religion and ethnic nationalities, including ‘patriotic education’. IMAGE: ICT.

TAR in 2006,¹² almost matching the reported 2.7 million Tibetan residents in the whole of the TAR,¹³ and this figure is expected to more than double by 2010.¹⁴ In July 2006, Xinhua reported that the number of tourists to Tibet was likely to grow by 15–20 percent annually after the opening of the Qinghai-Tibet railway. The number of flights operating to and from Tibet has also increased dramatically.¹⁵ There was a record high of just over 4 million tourists visiting Tibet in 2007, according to the state media.¹⁶

Apart from the genuine spiritual interest of many Chinese Buddhists in Tibet as a place of pilgrimage, the place is becoming a fashionable destination. An article in *Time* magazine on ‘Tibet chic’ said factors contributing to its popularity include an interest among younger Chinese in “a jaunt on the high plateau” as “a badge of cool”, as well as the increasing availability of information about Tibetan culture in China.¹⁷

Tibetan culture has been commercialized with new products on the market including Tibet Grass brand ginseng-berry juice, a sorghum liquor called Tibet Fragrant Spring and Tibetan Highland barley wine. “Chinese like our drink because of Tibet’s myste-

rious feelings,” said one Chinese entrepreneur selling Tibet Fragrant Spring. Tibetan jewelry is on sale in trendy Shanghai boutiques, and interest in Tibetan traditional medicine as a cure for illness is on the rise.¹⁸ According to one account, Lhasa has even become a popular pick-up place for a new generation of more sexually liberated young Chinese adventurers.¹⁹

In an article on a Chinese-language website, a Tibetan writer observes: “I hope that Tibet soon becomes unfashionable and is no longer a ‘hot item’, because only then is there the possibility that Tibet will retain the things that should be retained.”

The complex responses of Tibetans to modernization and the coming of the railroad, as well as their feeling about the preservation and development of Tibetan culture, were reflected in an exhibition of contemporary Tibetan art which opened in the United States soon after the railroad began operating. ‘Lhasa Train’ featured paintings of the train by young Tibetan artists living in Lhasa. The co-owner of a Santa Fe gallery that exhibited the work, Ian Alsop, said that the paintings showed that Tibetan reactions to the train were not easily defined. Many welcomed aspects of contact with the outside world, while one of the artists had traveled to Beijing on the train in order to catch a flight to attend the exhibition.

In one painting, entitled ‘Laughter’, by Tenzin Jigme, Tibetan men and women are laughing hysterically while a train speeds by in the darkness. The artist said: “They are laughing because the government and the media say the train will bring prosperity. It’s a staged event.” He describes the emotions of a group of men watching the train’s smoke darken the sky in another painting as “happy, sad, and angry”.²⁰

In Tsering Nyandak’s painting, ‘Pissing on the Rails’, four boys urinate on the railroad track. In an interview, Tsering Nyandak suggested that the meaning was not as obvious as it seemed, explaining that the painting depicted a future time when Tibetans will be accustomed to the train and saying that the tracks have become “nothing special” to the boys in the painting.²¹

In a painting by Gade, a Tibetan building enclosed within a Buddha’s head sports a giant red and white Coca Cola sign, and monks with pastel-colored balloons disembark from the train. “Tibet has gone through [another] Cultural Revolution, and it has turned into a resort center,” Gade explained to fellow artist Tsering Nyandak in a taped interview. He added that Tibetans have to look at Coca-Cola signboards every day, and although the Walt Disney Company has not built a theme park in Tibet, he feared it might happen.²²

How tourist revenue goes back to China

TAR officials set a target of 3.4 billion *yuan* (US \$460 million) in revenue from tourism in 2007²³ and expect at least 6 billion *yuan* (US \$770 million) from 6 million tourists in 2010. But analysts report that much of the revenue from tourism leaves the region to go back into China.

Development economist Andrew Fischer says: “Most of the tourists visiting the TAR are Chinese nationals and they mostly stay in Chinese-owned and -run hotels on the west side of Lhasa, close to an abundant supply of Chinese restaurants and entertainment centers, complete with Chinese brothels and Chinese sex workers, who obviously service the military personnel and cadres stationed there as well. It is likely that much of the revenue that such tourism generates is channeled through such venues and eventually out of the province altogether. Under such conditions, the tourism industry will have a difficult time functioning as a self-sustaining pillar industry that accumulates capital and profits in the TAR, rather than servicing as another drain from which incoming resources flow back out of the province almost as fast as they enter.”²⁴

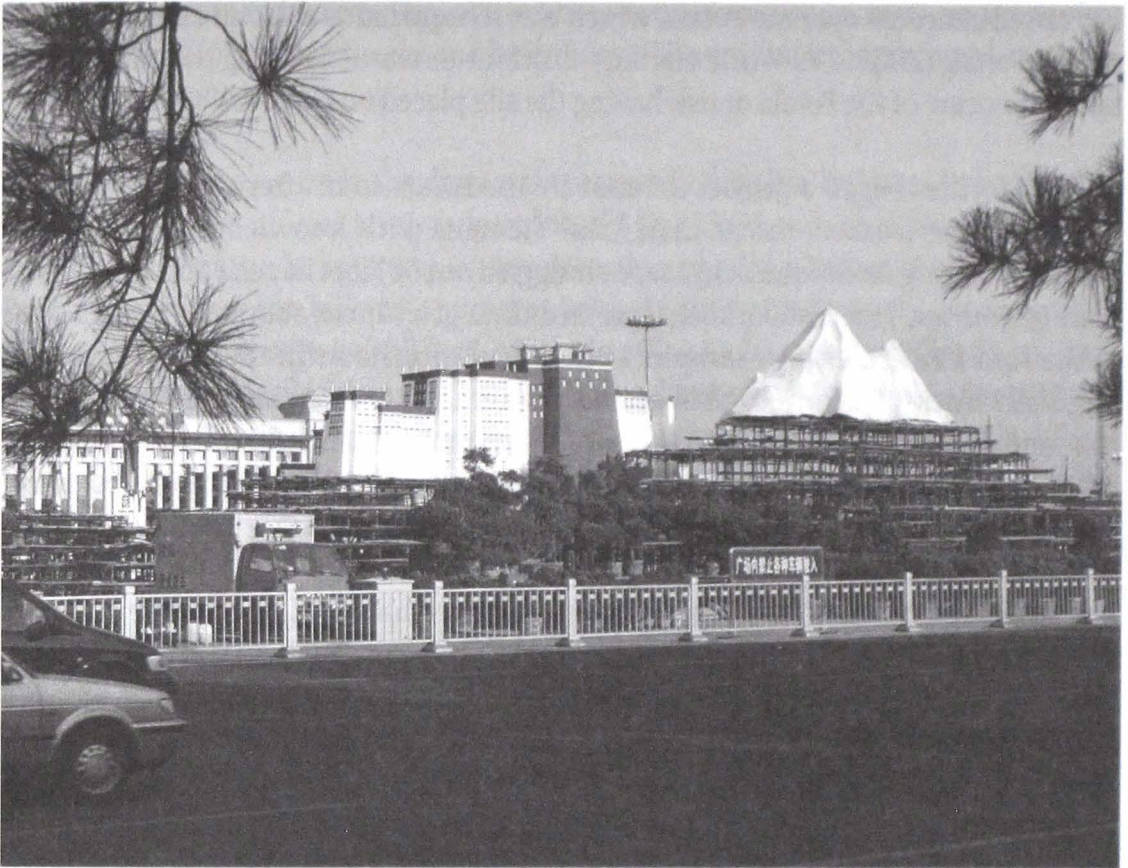
A Tibetan hotelier in a traditionally Tibetan part of Yunnan Province estimated that 65% of profits from tourism go to outside businessmen, 10% to the government, 20% to local businessmen, and less than 10% to local villagers.²⁵

The threats to Tibet's heritage and cultural identity

“This great piece of architecture, like a thousand beams of light illuminating the ancient city of Lhasa, is seen as the symbol of Tibet by people throughout the world. Straddling the peak of Marpo Ri at the center of the Lhasa Valley, whether by its appearance or in the eye of the beholder, [the Potala Palace] holds an irresistible attraction. At the beginning of the 20th century, an English correspondent who entered the rooftop of the world with armed troops invading Tibet, on seeing Potala Palace from a distance ‘like flames shining brilliantly under the sun,’ sighed with emotion, ‘This is not a palace sitting on top of a mountain; it is a mountain of a palace.’”

— Tibetan writer Woeser, in ‘Decline of Potala Palace’²⁶

The dramatic increase in tourism since the opening of the railway has been especially acute at Lhasa's historic cultural sites, such as the Potala Palace, the Jokhang Temple in the Barkhor area, and the Dalai Lama's former summer palace, the Norbulingka.²⁷ These sites also have a deeper significance to the Tibetan people because of their con-



A replica of the Potala Palace was built in Beijing to honor the opening of the Qinghai-Tibet railway as part of celebrations for China's National Day, marking the anniversary of the foundation of the Chinese Communist Party (October 1, 2006). It was an almost surreal assertion by the Chinese authorities of their 'ownership' of Tibet through the appropriation of an institution of such profound cultural, religious and political significance. The Potala is the former home of the Dalai Lama, who fled Tibet into exile in 1959, and as such was the effective headquarters of the Tibetan administration before China's invasion in 1949-50.

nection to the Dalai Lama and Tibet before the Chinese invasion — the Potala, established by the Fifth Dalai Lama, was the political and religious center of Tibetan theocracy. Tibetan writer Woeser has described it as the "soul of a race".

The recent increase in tourism coincides with expressions of concern for the Potala Palace made by the Paris-based United Nations Educational, Scientific and Cultural Organization (UNESCO), which works to preserve cultural and natural heritage worldwide. At a conference in July 2007, UNESCO expressed concern for the former home of the Dalai Lama, saying that growth in the area encompassing the Potala lacks an "integrated urban development planning process".²⁸ This is not the first time UNESCO

has raised concerns over the Potala, which was recognized as a World Heritage Site in 1994. In 2004, UNESCO's World Heritage Committee warned Beijing that it needed to take better care of the Potala or risk having the site placed on UNESCO's 'Danger List'.²⁹

The authorities began a project to renovate the Potala soon afterwards — but they hired Chinese workers rather than local Tibetans with knowledge of traditional Tibetan building techniques. On a tape smuggled out of Tibet in 2004 and aired by the *Voice of America*, Tibetan workers expressed their grievances about the repairs done to the Potala Palace, citing examples such as replacing floors in the Potala that were originally made of a composite of marble dust and oil with an inferior composite of concrete, hair, and glue, and referring also to the replacement of traditional tamarisk wood spacers in the building's walls with cement and pieces of iron. Speakers on the tape asked the United Nations to “lend its support in real terms”.³⁰

The Potala Palace is now in danger of becoming overshadowed by concrete and glass due to the lack of a development plan for the area. The Tibetan writer Woesser comments: “Shall we add more functions — entertainment or circuses — to the Potala, which has been insulted through politicization and commercialization for over half a century? Specifically speaking, this [the Potala] square, with the Potala Palace as its backdrop, has become the stage for tourists arriving from all around, to use for publicity, for fame, and for fishing around to make profits. This trend has gone too far to control.”³¹

In order to address concerns about the number of visitors since the railroad opened, restrictions have now been placed on the number of tourists allowed to visit the Potala each day. Before the start of the railway, the Potala Palace received an average of 1400 visitors per day, while after the railway opened in July 2006, it averaged 6000 tourists a day during peak season.³² This massive influx of tourists led officials to limit visitors to approximately 2300 per day, and Chinese officials are hoping that the new restrictions will “lighten the pressure on the ancient wood palace”.³³

At the same time as claiming the number of visitors to the Potala was being kept to 2300 per day in order to protect the building and the artifacts kept there, the official Chinese press in Tibet still proclaimed in December 2007 that the Potala Palace had received one million tourists that year. This means that the Potala in fact received over 2800 tourists per day, considerably more than the 2300 reported in the same article.³⁴

In a more bizarre solution to the pressure on Lhasa's heritage sites, officials plan on offering a “vivid and almost real” Potala ‘experience’ through building a smaller-scale replica of the palace at the base of the Red Hill, upon which the Potala stands in Lhasa.³⁵

According to Qin Yizhi, Secretary of the Lhasa Party Committee, work on the replica was scheduled to begin in the second half of 2007. The replica will be housed in a “treasure exhibition hall.”³⁶

The problems arising from the dramatic increase in tourism in Lhasa have been acknowledged at an official level, at least locally. Qin Yizhi, vice chairman of the TAR and Secretary of the Lhasa Party Committee, described the influx of tourists at the Potala Palace since the railway opened as being “unbearable.”³⁷ In an article entitled ‘Tourism begins to overwhelm Tibet’, a Tibetan official acknowledged that Lhasa “may look prosperous, but problems are lurking around and should not be neglected.” The same official, Ngodrub Phuntsog said that limited capacity indicated that Tibet’s tourism industry was not sufficiently developed to cope with the dramatic increase.³⁸ Another recent official report stated that the growing demand for water caused by tourism and urbanization has already outstripped supply.³⁹

A Tibetan resident of Lhasa told a Radio Free Asia call-in show that “Wherever you go [in Lhasa today] you get the impression of overcrowding. [...] Tibetans [witness] Chinese tourists becoming permanent residents”, she said, and reported that: “Chinese migrants were moving fast into formerly Tibetan neighborhoods and businesses.”⁴⁰

Despite the concerns that have been expressed at a local level about the speed of development, at the end of 2007 the authorities introduced new measures to further commercialize tourism in Tibet. The new measures included help from the state for Tibet to “expand the scope of commercialization of tourism”. A further measure was to train more Chinese tour guides, expanding the numbers of guides trained to 200 per year.⁴¹

New hotels to attract high-end tourism

An official report on the TAR authorities’ long-term plans for tourism indicates the scale on which tourism development is linked to the railroad, estimating that 85,100 hotel rooms will be needed along the railway route by 2020.⁴² While the report recommends against building “high towers and star-rated hotels”, instead opting for “more family hotels, small-scale inns and non-permanent facilities with strong local cultural and architectural features in the community”, plans are firm for Lhasa’s first five-star hotel. The St. Regis, Lhasa, is scheduled to open on December 1, 2009 in the Barkhor district, and will be the first international-branded hotel in Tibet since the Holiday Inn closed in 1997.⁴³

Ross Klein, president of Starwood's Luxury Brand Group, declared that the St Regis will be "one of the most extraordinary luxury resorts not only in Asia, but in the entire world".⁴⁴ The St Regis, Lhasa, which is to be "perched in the famous Barkhor area where the Tibetans live" according to the Starwood Hotels website,⁴⁵ will have rooms starting at around US \$400 per night.

The head of global sales development at Starwood, Jack Lim Ming-boon, said that the interest surrounding the Olympics had prompted the Chinese government to promote all areas of the PRC as tourist destinations, particularly the cities of Beijing and Shanghai. But he added that while after the Olympics a slowdown was expected in Beijing, this did not apply to the rest of the country: "The China Tourism Bureau is very aggressive in participation and sponsoring roadshows to create awareness. They will continue to explore, support, promote and create nice markets by developing new destinations such as Mongolia, Urumqi and Tibet."⁴⁶

Elsewhere in the Barkhor in Lhasa is the Shambhala Palace, a hotel owned by American entrepreneur Laurence Brahm. A government-controlled website acknowledged criticism of Brahm that highlighted the complex responses of Tibetans to the appropriation of Tibetan culture by private enterprise and through foreign investment: "Laurence Brahm is intelligent. Some says [sic] that he is taking advantage of others' culture to make his own profit. However, harboring a sense of sustained cultural development without national boundaries, he has groped about a new path to profitable cultural development in China."⁴⁷

Another high-end hotel, the Brahmaputra, is owned by a Sichuanese entrepreneur who places an emphasis on Tibetan culture in the décor and appointment of his hotel in Lhasa. According to one account, the hotel owner travels to monasteries and other sites in Tibet buying artifacts and pieces of Tibetan artwork which he then uses to decorate the Brahmaputra, as well as selling them to hotel guests at a huge markup. He was followed by a Japanese documentary crew on one occasion when buying items at a monastery, and is heard making disparaging remarks about a shoe once worn by the Fifth Dalai Lama and kept as the monastery's oldest treasure. "Hmph. This old thing?" And then to his translator as he pointed to two other artifacts: "We'll take these off him. How much? Ask him. Offer him another 500 *yuan* and see what he says, okay? Five hundred."⁴⁸

One of the world's most endangered destinations

“It is not just Tibet which is under imminent threat in this world, it is also our souls. The worth and magic of Tibet’s precious heritage to mankind has been jointly built by Tibet itself and by people who have a reverence and a love of Tibet. However, this Tibet is gradually fading from our peripheral vision and beneath our feet. It seems controlling the number of tourists as in Bhutan would not be possible, but what we can do is control our attitude towards Tibet, and our actions on Tibet: appreciate it in peace, harmoniously blend in, consume simply, create less waste, respect the Tibetan people’s spiritual lives, do more to protect the environment on the plateau, and at the same time mobilize the strengths of the people to supervise the activities of government and commercial power-holders to stop them from damaging this holy land on the plateau in the name of development.”

— Chinese journalist Zhuang Liwei⁴⁹

Listing Tibet on its website as one of the “world’s most endangered destinations”, in May 2007 the magazine *Forbes* singled out the railroad as a major factor in the boom in tourism in Tibet, reporting: “For the past several years, the country has seen an explosion in the number of hotels being built to accommodate an increasing number of tourists and has also felt the effects of mainland Chinese moving in and starting businesses.”⁵⁰

Both Tibetans and Chinese are voicing increasing concerns about the impact of tourism and development on Tibet’s fragile environment.

In an impassioned article entitled ‘Please protect the holy land of the Tibetan plateau’, writer Zhuang Liwei wrote on Nanfang Newspaper Net: “When the four-wheel-drive jeeps roll into the ‘three river-sources’ area [in Qinghai Province, where the Yangtze, Mekong and Yellow Rivers all rise], and when tourists continue the lives they normally live in the interior but in the nightclubs of Lhasa, and when the tourists cannot shake their habits of eating and drinking to excess so that the plateau has to produce even more beef and beer to support them, when Tibetan stoneware and wooden artworks become more and more the target of fashionable purchases for tourists, and when large numbers of people flood onto the plateau and over-dig and over-pick Tibet’s resources and engage in all kinds of ‘commercial development’, the Qinghai-Tibet plateau’s natural environment and the human cultural environment will become weaker by the day.”

An example of the perils of untrammelled tourism and over-development in Tibet

is found in the case of Gyalthang County (Chinese: Zhongdian) in Dechen Tibetan Autonomous Prefecture (Chinese: Diqing TAP) in Yunnan Province — part of the traditional Tibetan region of Kham. In 2001, amid fierce competition between other mountainous areas in and around Tibet, Gyalthang County was given permission by China's State Council to officially change its name to 'Shangri la'. The name-change was part of a strategy to market the county as a tourist destination. 'Shangri la' is a fictional creation, the name of a secret Himalayan idyll in the 1933 novel 'Lost Horizon' by James Hilton.

According to one report in the western media in late 2007, Gyalthang County receives 2 million visitors a year, and from a rural county of only 122,000 people in 2001 it is changing into "a high-altitude hell, choked by tour buses and overwhelmed by outsiders." A German tourist noted the overpriced tourist trinkets, hotels and other services, and said "This is not heaven on earth. This is a tourist trap." And yet the deputy director of the local tourism bureau hopes to attract 5 million tourists by 2012. "We have set no limits on how many tourists come here. [...] The more the better." Even the person responsible for pushing to have Gyalthang's name changed regrets the changes wrought to the town and to its inhabitants, saying "The original spirit has disappeared."⁵¹

PERSPECTIVES: HOW THE RAILWAY HAS LED TO A LOSS OF HOPE

"With the railway being built to Tibet, the Tibetan people have lost hope and they feel that their door has been thrown wide open."

— Chinese writer Wang Lixiong, 2006

In an article published on the *Observe China* website in the week before the opening of the railroad to Lhasa, the Chinese writer Wang Lixiong gave his reflections on the railway's meaning to the Tibetan people and called for the establishment of a special 'cultural zone' in Tibet to protect Tibetan culture. This is an edited version of the interview.⁵²

"Construction of the Qinghai-Tibet railway to Lhasa, which will be open to traffic on July 1 this year [2006], will bring outstanding prospects for Tibet's economic development. But when the door is opened, mysterious Tibet will no longer be mysterious, and there is a profound worry that Tibet will not be able to withstand the onslaught of a competitive market economy. The railway is already an incontrovertible fact, but enormous efforts will be needed to preserve Tibetan culture. The independent Chinese writer Wang Lixiong is calling for the establishment of a 'special cultural zone' in Tibet to protect the purity of Tibetan culture.

Wang Lixiong has been to Tibet more than 20 times in recent years, driving himself in along the four roads — the Qinghai-Tibet road, the Yunnan-Tibet road, the Sichuan-Tibet road and the Xinjiang-Tibet road. [...] Wang Lixiong has written *Sky Burial — the Fate of Tibet*, he has traveled to the US on four occasions to meet with the Tibetan spiritual leader, the Dalai Lama, he wrote the book, *Conversations with the Dalai Lama*, and he has a deep interest in Tibet.

When he received a visit from *Observe China*, Wang Lixiong revealed his concerns about the opening of the Qinghai-Tibet railway. Not long before, Wang Lixiong had met the owner of a factory making high-class Tibetan-style furniture who was very happy about the railway opening because of the opportunity to open markets in the interior, capitalizing a new craze for Tibetan furniture. But Wang Lixiong says, 'Think about it the other way: as soon as the train arrives, furniture from the interior will come into Tibet and the environment for Tibet's furniture market will change. Even if there's going to be a new fashion for Tibetan furniture, [the factory owner] doesn't know how much factories in the interior copy things, and so any advantage you have just disappears.' What Wang Lixiong has realized is that culture and the economy are linked. It's not just Tibetan furniture but also all Tibetan-style items of daily life — and even the entire lifestyle itself — which will be affected by the convenience of transport.

Special characteristics of Tibetan culture determine the people's strengths and weaknesses.[...] The Barkhor around the Jokhang temple is a symbolic place in Tibet. It is the main commercial center for Tibetan culture, and it is a place where Tibet's market economy is manifest. However, Hui [ethnic Chinese Muslims] people now make up the majority of traders on the Barkhor. There are still a few stalls with Tibetans, but the most important storefronts are occupied by Hui and Han people. According to Wang Lixiong, the Tibetan residents of the Barkhor rent their homes out to Hui or Han because they themselves don't want the hassle.

Once they have this money, these Tibetans are liable to rent a cheaper place further away, and spend the remainder on good food and drink and having a good time. What worries Wang Lixiong is that while Tibetans use this money to have a good time for a while, they are not gaining any mastery of market competitiveness; the original handicrafts go into decline and the market is taken over by outsiders, marginalizing the Tibetan people. Home-owners who face a crisis they cannot overcome are likely to sell off their homes. 'This kind of thing is happening a lot,' says Wang. 'Homes around the Barkhor were rented at first, but now they're being sold, and the Barkhor which used to be the most Tibetan of symbols is slowly changing.'

For cultural reasons, Tibetans may prove victims of economic openness. Wang Lixiong says that the ongoing coercion is not the same as that of the past, which was applied with bayonets. On the surface it looks voluntary, voluntarily selling homes, voluntarily withdrawing from the competitive market; Tibetans want to go and have fun, but the outcome can still be disastrous. 'The absolute majority of the handicraft industry has been taken over by Hui and Han.' For instance, tailors who make traditional Tibetan costumes only use traditional methods. There is not much specialization, and efficiency and delivery dates aren't much of a consideration. But Han people are not the same; Han people pay attention to samples, they add a little on the shoulder, take a little in at the waist, and this kind of product is extremely attractive. The pieces are better looking than the original Tibetan pieces, the price is less and the service is better, and so Tibetan people wanting clothes now seek out Han tailors to make them.

'Tibetan people are faced with two difficult choices when they are faced with the market economy: even though it touches upon the quality of your life, you are likely to be more and more sidelined in the un-compassionate market economy, and so you either withdraw and live your life on the margins of the economy, or you abandon your traditions and throw yourself into it, but lose your culture.' Wang Lixiong said this isn't the same closed-off situation as before: [describing the Tibetans] 'We were poor but we were happy, with butter tea to drink and *tsampa* to eat, and we'd sing and dance beneath the blue sky and white clouds with our sheep and yaks out in the pastures. Life was very good. Now, close neighbors can be seen with a car and a house in their materialistic lives, but they have lost their souls: if they don't abandon their own culture, they can only regress; if they enter the ranks of those in pursuit of material wealth, they will also abandon their culture and face a different kind of problem and loss.'

Considering historic and future development, Wang Lixiong's call for the preservation of culture is a conscious strengthening of protection for the traditional Tibetan culture and lifestyle. 'It is of course extremely difficult to cut oneself off from the environment of the market economy, but I think that as a country which calls itself socialist and as a country which claims to pay special attention to ethnic cultures, we need to consider within the trend of globalization whether or not we have any way of protecting traditional culture. I think in order to protect those ethnic cultures which are not suited to the market economy and which cannot grow in a market economy, the concept of 'Special Cultural Zones' or 'Culture Protection Zones' could be explored.

Wang Lixiong considers that first of all, large numbers of migrant workers should not be allowed to enter Tibet. The migrant workers who are already there should be gradually moved out to let the region slowly recover its original Tibetan culture, and then use exchanges to help protect the ethnic culture. 'Necessary personnel such as hotel managers or communications personnel and other specialist staff could be recruited from outside, but there would be limits on the huge numbers of people coming in to work in the food, handicraft and construction industries.'

The Tibetan people's culture is a culture formed by traditional natural conditions and lifestyles; it is not a culture formed by materialism. Wang Lixiong says that in one aspect Tibetan culture faces a quite unique natural environment, and in another aspect it has established a universal religious system. 'Tibet has been called the Land of Buddha in the Snow Mountains, and this is the basic concept of Tibet, snow mountains are its nature, and Buddhism is the core of Tibetan culture. If you take the Land of Buddha out of the Snow Mountains and into the mortal world to compete with capitalism, how is it going to survive?'

Wang Lixiong emphasizes that Tibetan culture is not just an asset for humanity, it is also the most valuable thing to the Tibetan economy, it is its competitive advantage, and with such a resource Tibet is attractive to the entire world. Wang Lixiong says, 'Everyone wants to come to Tibet on pilgrimage or as a tourist as part of this worldwide craze for Tibet. They don't want to see your modernization, they don't want to see the changes in Tibet, they want to see traditional Tibetan culture, the best thing in Tibet is its traditions. Once they've been trashed and squandered, what else does Tibet have?'

'THE DOOR TO TIBET HAS BEEN THROWN WIDE OPEN'

Wang Lixiong thinks that with the railway being built to Tibet, the Tibetan people have lost hope and they feel that their door has been thrown wide open. Before, Tibet was sealed away behind mountains and skies and protected by the natural environment against the incursions of outsiders. In the 19th century a constant stream of people tried to go to Tibet, but ultimately it still maintained its unique character until the CCP's 'peaceful liberation of Tibet' in the 1950s, and even then, only a relatively few cadres went there. After opening up and in particular in the last 10 years, large numbers of people from society's lower strata have flowed in, causing the most amount of damage. 'I think there's still time now, but my worry is that the government won't do anything.'

Mining has polluted the environment, and there are now no more pristine river beds. The mineral water once drunk by sheep and yaks has now changed to an unbearably muddy mess in many places which poisons the animals that drink it. People have to fetch water if they want to drink clean water, and non-poisoned water that was once at their door now has to be found several kilometers away. Wang Lixiong points out that even capitalist countries protect ethnic minority cultures, that American Indian reservations are cultural protection areas, and so why can't China do this too? 'I think that the Dalai Lama's idea of a high degree of autonomy is not asking for an independent state, but protecting Tibetan culture in the framework of the state, and this should be a point of common ground. If China suggested a relatively independent culture protection area, it would accord with the Dalai Lama's high degree of autonomy, and would be a progressive step.'

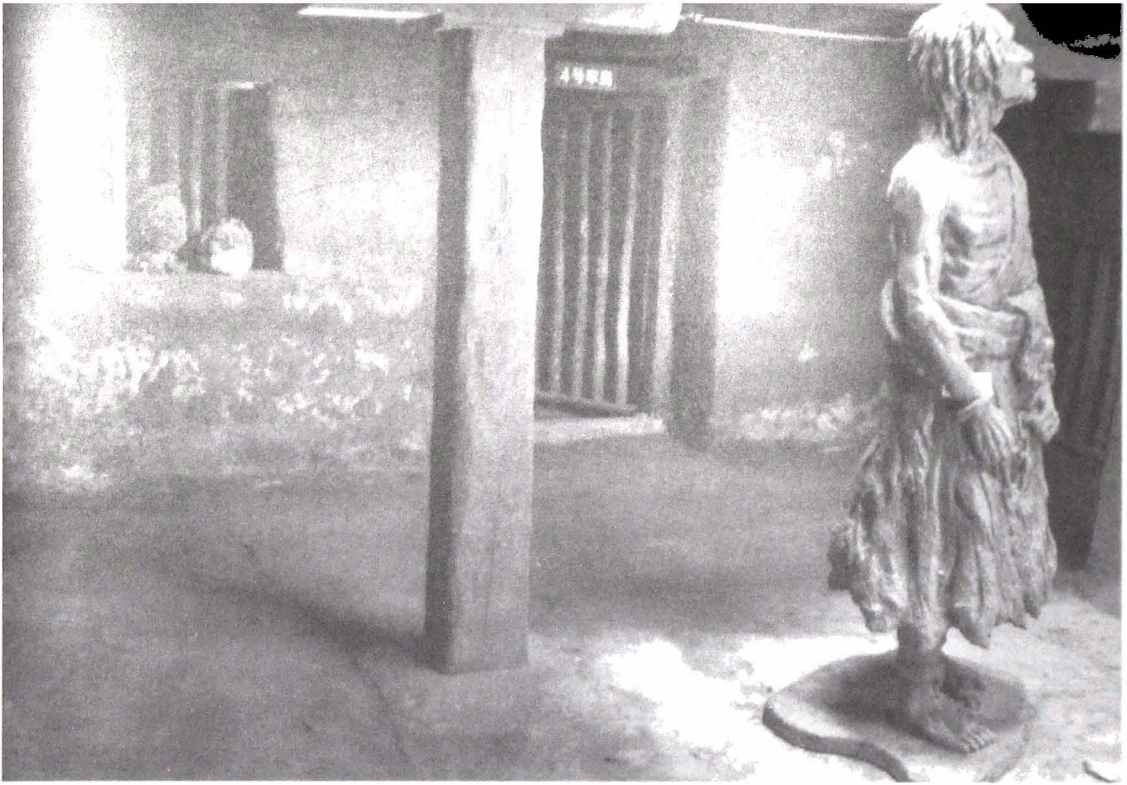
Wang Lixiong emphasizes that protecting Tibetan culture is not to deny them the right to modernization; their lives should be modern, but the problem is that no one has asked the Tibetan people what they themselves want. 'I think building roads, tall buildings, these are all government projects. My definition is what people need to be satisfied which is not the same as what people want; to eat one's fill and dress warmly, to have healthcare and security in old age are appropriate to a comfortable life. If these basic human needs can be adequately satisfied, then lives will be comfortably led.' With regard to the damage done to Tibetan culture, there are Tibetans who say with remorse, 'We have lost our original possessions, to pursue what originally we didn't need.'"

PERSPECTIVES: CONTRACTING OUT TIBETAN TOURIST ATTRACTIONS TO CHINESE COMPANIES

A Tibetan writer gives an account of the new commodification of Tibetan culture through Chinese enterprise on a Chinese language blogsite. The blog is no longer online having apparently been shut down by the authorities.⁵³

"A new trend at the moment is for tourist attractions to be contracted out to mainland companies. As far as the owners of the tourist attraction are concerned, this saves a lot of trouble — they don't have to worry about anything and just sit there receiving the money. The running of the tourist attraction is all taken care of by the mainland company.

For example, Gong'ga Langjiling Monastery in Dabpa County [Chinese: *Daocheng*,



It is indicative of the continued importance of propaganda on Tibet's history that a new 'prison museum' has been opened in Lhasa. The museum uses models and language in a style reminiscent of the Cultural Revolution, with its unsophisticated representation seemingly at odds with China's attempts to project itself as an advanced 21st century world power. This image shows a statue of a 'feudal serf' in prison; Tibetans have placed money in the hand of the model to indicate sympathy. The Tibetan government in exile commented in a recent report: "At all times, the official voice of the state provides the [...] explanation, depicting Tibet's journey from darkness to light, from oriental despotism to holiday destination, from enslavement by nature to mastery of nature." (Tibet: A Human Development and Environment Report', Department of Information and International Relations, Tibetan government in exile, December 2007.) IMAGE: ROBERT BARNETT.

in Kardze TAP, Sichuan Province] in Kham is contracted out to a company in Chengdu. That company's project is to develop profit-making at the monastery, from selling tickets and *khatag* [Tibetan white blessing scarves] and incense to selling statues of the Buddha and *thangka* [Tibetan religious paintings]. As soon as you enter the monastery you see employees wearing all kinds of maroon uniforms looking not quite like monks; they look more like tour guides but they're actually sales assistants. They first give a simple overview of the monastery, and then try to persuade tourists to buy *khatag* and incense, exaggerating the benefits the incense will bring and what disasters will befall them if they don't buy and burn incense. Each stick of incense is 200 *yuan* [US \$27], around a meter long with the girth of a bowl. Incense like this was never burnt in Tibetan monasteries and people think it is very strange. Once the incense is burnt, people are urged to buy a statue of the Buddha, and more exaggerations are made about where the statue came from and what good

karma and fortune it can bring. The most calculated bit of business though is getting tourists to buy *thanka* but not take them, instead leaving them at the monastery as a meritorious act. The *thanka* is then sold to another tourist, and another and another and another.

The monastery has become very lax since being contracted out. The management at the monastery used to be very strict, and monks who didn't take part in recitals were fined. But now none of the monks read scriptures, saying seeing as the *tulku* contracted the monastery out for money, where is the need to recite scriptures? It's obvious therefore that even if some benefit can be obtained in a short moment of time, the price paid in comparison is an irrecoverable loss. There are not a few monasteries in Han Chinese areas which have adopted this contracting out model, and it is an important reason for the over-commercialization of monasteries in Han areas. It's starting to spread into Tibetan areas, and the results could be disastrous.

Many tourist areas have been opened up in Tibetan regions in recent years, but because of a lack of managerial experience and funding, a lot of them are being contracted out to mainland companies to run. Local people can gain an economic benefit in a short amount of time when the contracting company takes people and provides tourist services, but their social standing is likely to fall to the status of migrant labor or service sector workers. Locals start to feel subservient to the companies and the tourists, and gradually become shamed of aspects of their own culture, causing it to decline in its own land. At the same time, changes to traditional lifestyles and traditional means of production will make local people's benefits unreliable. Everything comes from the boss who arrived from outside, and there is none of the autonomy and freedom of before. As soon as they lose their job, they lose their means of survival. If the tourist attraction loses its appeal to tourists, or if the contractor folds or goes away, by that time the local people have changed completely and have no way of going back to their traditional forms of production and lifestyles and possibly sink into a difficult dilemma."

JOURNEYS: 'EVEN TODAY, THERE ARE STILL SOME TIBETANS WHO DON'T SPEAK CHINESE'

A Tibetan writer wrote the following account of a train journey to Lhasa in January, 2007, published on a Chinese language website.

"Two people get off at Xi'an. One is a good-natured middle school teacher who wants

to travel to Lhasa during his summer vacation. He was asking things like: “What’s the elevation of Lhasa?” and “What’s the temperature in Lhasa in summer?”, or “How much is the train ticket to Lhasa?” and “Before, you wouldn’t often hear ordinary people from the interior saying they wanted to go to Tibet, but now as soon as you mention Tibet everyone says it. Huh. With the train now, you can go there whenever you want.”

A woman with a pale face and freckles on her nose gets off at Xining. A typical Han woman: slim and fragile, didn’t utter a word, a touch of alarm in her expression. Aside from sending text messages she was either reading a woman’s lifestyle magazine or embroidering butterflies onto a piece of cotton. Just before getting to Xining she heard me chatting with a Tibetan couple and was amazed: she interrupted saying I didn’t look Tibetan. She said she had been to Tibetan places like Qinghai Lake and Tsoshar [Chinese: *Haidong* TAP], but felt that the Tibetans there were uncultured; I on the other hand was cultured. I really wanted to laugh. I asked her what she did and she said she was a grad student studying tourism planning.

There was a young couple whose parents were Han Chinese and who had moved to Xining way back when to ‘construct the great northwest’. The man studied management in Nanchang [the capital of Jiangxi Province in southeast China], before which he’d studied at some police officers’ college. He said there were two Tibetan men in his class. When they first came to the school they were simple and honest, but by the time they graduated they were swearing along with everyone else. In the photographs they’d brought from home, the sky was so blue and the clouds were so white, making him really want to go and see for himself. They were both in the police now and so it was easy for them to go anywhere they wanted in Lhasa.

TIBET HAS BECOME FASHIONABLE

Tibet has become fashionable. Tibet’s ‘fashionability’ is manifested most in the fashionable professions it attracts. The entertainment industry has a Tibetan flavor. When a popular singer thought to be called Zhou Peng wanted to re-brand herself, she chose a more than bizarre name for herself: Sa Dingding. This is just like Zhu Zheqin, who when she goes to abroad to sing adopts a special Tibetan name — Da Dawa. Sa Dingding flutters her hands in Tibetan *tai qi* strokes, she sings in the Tibetan style and wears Tibetan pendants and colorful Tibetan clothes. Even makeup is getting a Tibetan flavor. The latest Jin Yuxi range of makeup is branded using the Tibetan script, and that’s not even getting into the whole branding of tourism.

A Tibet which has become fashionable will become unfashionable. Fashions are after all fleeting, and will sooner or later become passé. I hope that Tibet soon becomes unfashionable and is no longer a 'hot item', because only then is there the possibility that Tibet will retain the things that should be retained. If not, Tibet will become sucked into a fashion whirlpool and become just a symbol of consumerism, entertainment and clothes and jewelry, while what's lost is one's own dignity. Last year, Beijing's photography circles had a theory about how best to photograph Tibet, and some honest and well-meaning photographers said when tens of thousands of people rush to Tibet with their photographic equipment, they should maintain a 'respectful distance' — this is what they mean by mutual respect.

I notice that whenever the train goes through a station, Han Hong's 'Sky Road' comes over the PA system, which brings to mind that when you fly into Lhasa, the song played is 'The Condor' sung by Yadong. Each of the two songs uses interesting symbols: the dragon describes the train, and the condor describes the aircraft, both rushing towards Tibet and doubtless representing the advent of unstoppable modernization. But there is stealth on the part of the pilots and drivers, they occupy a commanding position and they are the sole arbiters of power with the great and awesome power of an emperor; and so as the song goes, gratitude for the fact that 'barley beer and butter tea will be sweeter' by the 'Tibetan sons and daughters' can only be expressed with 'Happy singing voices [that] are heard all around'.

There are only six Tibetans in number 13 carriage. Aside from me, there is a family of six. A very young woman has with her five children. The young woman is their aunt. The child with a pennant of the Dalai Lama hanging from his chest is the eldest, and he has with him his two younger brothers and two younger sisters. This of course is what I found out for myself. They'd barely looked at me at first but when then heard me speak Tibetan they stared at me wide-eyed and said 'Böba?' — are you Tibetan?

They were all wearing children's clothes fashionable in Beijing, well fitted and as comfortable as Tibetan clothes. They adapted to their small surroundings very quickly, their eyes flashing with delight as they chatted without any inhibitions, laughing loudly, more natural and relaxed than anyone else. They reminded me of the three Tibetans I'd seen once at a vegetarian restaurant close to the Lama Temple in Beijing: a lama, a nun and a young girl. They all looked alike, and indeed when I asked they told me they were all brothers and sisters from Derge [Chinese: Dege, in Kardze TAP], the same part of Tibet as me. Their skin was beautiful, with a rouge inside the whiteness, a whiteness that was translucent and a rouge that was trans-

parent. Their eyes were incredibly clear, particularly the nun's and the young girl's, without a trace of impurity, but there was a great deal to see in the young lama's eyes. Next to the lama was a fat Chinese woman busy ordering dishes from the menu, looking like she was his patron as well as his disciple.

The five young Tibetans could all speak Chinese but with a northeastern accent which became thicker the more excited they became. They had been sent to Shenyang [the provincial capital of Liaoning Province in eastern China] by their families to learn Chinese and English, but mainly Chinese. This is because their uncle is a *tulku* and has many Han disciples in Shenyang. These five young Tibetans had started their lives as nomads on the pasturelands of Chamdo [Chinese: Changdu, in the TAR]. Apart from their auntie who had spent a few years at school, none of them had ever been to school before. If they'd gone to school in Lhasa, for one they would have been too old, and for another the study fees would have been too high. In Shenyang, the fees are only 600 *yuan* [US \$81.39] per year, and they were also being well supported by the *tulku's* disciples. And the results were obvious: having studied for only 10 months they could basically converse with Chinese people without any problem.

A person from Henan province was asking them all kind of questions: which is easier to learn — Chinese or English, do you like Chinese food, etc. He also said, "The Dalai harmed the Party and then fled," whereupon all five children started arguing so fiercely with him he almost couldn't take it.

The auntie told me that there were a lot of Tibetans in the hard seat carriages. I really wanted to go and see, and so I went to the hard seat carriages to have a look. Looking generally around the carriages, some had around 30 Tibetans; some had a dozen or so — in total there were no more than 60 people. Basically, they were students, although it seemed there were some old Amdowans going to Lhasa on pilgrimage. We weren't permitted to go to the soft sleeper cars, but we heard from a train attendant that there were some senior Tibetan cadres in there.

I had to squeeze the train attendant like a tube of toothpaste to get any information out of her, such as: she makes three trips a month, gets 900 *yuan* [US \$122] subsidies and 2000 *yuan* [US \$271] wages. Many people go to Lhasa in the summer and fewer go in the winter; the railway is always going to be subsidized and never make a profit, but the state doesn't care and can afford the subsidy; the Qinghai-Tibet railway doesn't have much economic significance — its only significance is its political and military significance. It's hard work being a train attendant. Tibetan farmers

and herders don't know about cleanliness and they don't understand Chinese. Tut. Even today, there are still Tibetans who don't speak Chinese!"

PERSPECTIVES: TIBETAN CULTURE 'THREATENED BUT RESILIENT'

A European scholar who speaks Tibetan and has traveled widely on the plateau spoke to ICT about the changes to Tibetan cultural identity following the coming of the railroad.

"The railway makes long distance travel easier and cheaper for ordinary Tibetans, especially Amdo people coming and going to Lhasa, and central Tibetans coming and going to the mainland. But this hardly outweighs the negative impacts.

Tibetan culture is unquestionably threatened by current policies of migration from the mainland, urbanization and restrictions on freedom of expression. But the issue has to be framed in a historical context. Pre-communist Tibetan culture was destroyed to a significant extent in the 1960s on the one hand, but on the other, even if Sinicisation and repression continue unopposed, it is unlikely that all manifestations of distinctively Tibetan culture and (especially) identity will disappear.

The assumption that rural areas are more 'untouched' or 'traditional', or less affected by socio-economic modernization or by government policy, is basically false. Rural areas in many parts of the country have been crippled by deprivation and poverty of all kinds (especially education and health care) under communist rule, and in some cases for longer. The fact that village people wear traditional clothes or live in traditional-looking houses cannot meaningfully be considered 'cultural survival'. Religion and cultural policy in Tibetan areas outside the TAR is noticeably more relaxed. In fact virtually none of the monasteries in the TAR are allowed to function as educational institutions, but in eastern Tibet there are quite a few. In terms of literacy, cultural awareness and creativity, the Amdo region leads the rest of the country by far. This does not mean that they are not subject to essentially the same regime of political oversight and intimidation. And people in these areas (especially in Qinghai Province) have been the most affected by Western Development Strategy policies since 2000, displaced by mega-projects and dispossessed of their land or herds in the name of ecology. [See 'Social exclusion as a result of China's economic policies: Resettlement, relocation and urbanization', p. 105.]

The huge increase in tourism in recent years has had the effects that mass tourism

has had almost everywhere else in the world. In that sense, the fact that the vast majority of visitors are Chinese is more or less incidental. However, one result of this development is a great increase and diversification of people-to-people contact between ordinary Chinese and Tibetans.

No country is exempt from globalization, and ‘culture’ continually changes and adapts anyway, but the renewal of Tibetan culture in the global era has been thwarted by the hardening of Party’s Tibet policies since 1990 rather than by global interference.”

‘Interpreting Tibetan culture’: A way forward for tourism

Tourism has the potential to bring enormous financial benefit to Tibet and the Tibetan people. And as an industry, tourism can be a way to support the traditional Tibetan lifestyle as well as providing training and employment for Tibetans and non-Tibetans alike in Tibet.

However, the current model of tourism in Tibet not only directs the accumulated profits away from Tibet itself, it also places the power to interpret Tibet largely in the hands of Chinese guides and tour operators. These non-Tibetan operators are better trusted by the Chinese authorities to provide — in the Chinese language — the ‘politically correct’ interpretation of Tibet, its culture and its history. “What Chinese tourists take away as their impressions of Tibet often depends entirely on how their tour guide has represented the situation,” one Tibetan source who is familiar with the tourist industry in Tibet told ICT. The Tibetan Government in Exile (TGiE) has described what is put on show by the Chinese authorities as “the inert jewels of Tibet set in a crown of modern Chinese institutions”,⁵⁴ which has ever less relevance and connection to Tibetan culture as understood and lived by Tibetans themselves.

In a December 2007 report on Tibet’s environment and development, the TGiE states: “A telling example of the social exclusion of Tibetans is the regulation of tourist guides. In trying to draw their own picture of Tibetan history, the Chinese authorities have created obstacles to Tibetans working in tourism. Skilled Tibetan guides have many restraints imposed on their work. For the 2006 season alone, 70 new migrant tourist guides were sent from China under its so-called ‘Guides from Inland to Aid Tibet’. These Chinese guides are often graduates from college programs that teach an officially approved version of Tibetan history and culture, so that questions from tourists



Despite China's repressive presence and control, religious celebrations and folklore festivals are still held in many areas of eastern Tibet. These two images show a state-sanctioned inauguration of the opening of a new 'Lineage Tree Hall' at the Kardze Monastery in Kardze Prefecture (Chinese: Ganzi), Sichuan. (November 2005.) IMAGE: ICT.

are answered in accordance with Chinese propaganda. The growing numbers of Chinese guides are displacing the Tibetan guides who can speak in depth — from personal experience — of Tibetan culture.”⁵⁵

In the process of rapidly expanding the tourism industry in Tibet, Tibetans are being denied the ability and right to speak for their own lives and culture, even while increased and even un-trammled tourism is proving unsustainable in Lhasa in particular, but also increasingly throughout all of Tibet.

The TGIE states that it is only when local Tibetans are involved that tourism will realize its full potential to generate economic benefits and improve local living standards. It recommends better education as the first step towards this goal. The same report states:



“Providing more educational opportunities to Tibetans, and making the Tibetan language more prominent, are important steps in the empowerment of the Tibetan people. Tibetans should also be taught Chinese and English as second languages, since these are the primary languages of most tour groups in Tibet. The education system should train Tibetans with the skills and desire to share their heritage and landscape with visitors. But the challenges spread even wider than this. At the broadest level, Tibetans need to have the right and the means to both participate in decision-making and to operate tourism enterprises. This means educating Tibetans in the needs and desires of domestic and international visitors. Currently, very few Tibetans have the opportunity to learn these skills. It also means teaching Tibetans about business planning and administration. Traditionally, Tibetan businesses are seasonal, and they tend to quickly distribute their profits — often as religious offerings. Tourism requires longer-term planning, longer times than customary seasonal trading, and fair access to capital. Outside of Tibet, many Tibetans run successful travel agencies or own and operate hotels, but such opportunities are extremely limited inside Tibet. The tourism industry is increasingly dominated by large Chinese companies that do not offer training to the local Tibetans.”

The need for change in the way tourism is managed in Tibet is likely to come in part from the market itself, as more and more tourists — particularly international tourists but also domestic tourists from the PRC — increasingly prefer pristine landscapes and undisturbed environments. This growing trend means that rural Tibetans, who make up at least 80% of the population of the TAR, could increasingly acquire roles as conservationists and as custodians of the land. By allowing Tibetans greater participation in the tourism economy, Tibetan culture would be conserved by Tibetans themselves, and the Tibetan people would benefit environmentally and economically while retaining the right to interpret their own culture to visitors.

Tourist guides and local Tibetans could be trained in conservation and ecology in order to enable them to participate in the tourist economy as well as for the broader benefit of the environment.

The TGiE suggests that genuine ecotourism and 'ethnotourism' have great potential on the Tibetan plateau, as the number of tourists arriving in Tibet, usually seeking an exotic experience of the 'real' Tibet, is increasing each year — accompanied by the rapid development of an infrastructure to accommodate them.

The TGiE recommends establishing new conservation areas and encouraging local Tibetan participation in the planning and implementation of tourist activities. The exile authorities also recommend that the Tibetan people should be granted more control over monasteries, temples and pilgrimage locations as the present hierarchy does not encourage local initiative or active stewardship.

A further way to promote responsible tourism is to prepare travelers for their visit to Tibet by teaching about environmental protection and the survival of the culture.⁵⁶ International tour operators could play their part by insisting on Tibetan guides as well as ensuring that visitors are educated about the political and cultural situation before they travel.⁵⁷

Fundamentally, if the tourism industry in Tibet does not include more Tibetans as the stewards of their own culture and environment — the very assets upon which tourism in Tibet relies — there is the very real risk that the segregation and alienation already faced by Tibetans in Tibet will become so entrenched as to be irreversible, wholly undermining Tibet's appeal to tourists.

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- ¹ 'Grand development of tourism puts the world's attention on Tibet's social and economic development' [张庆黎：旅游大发展让西藏经济社会发展受到世界关注], interview with Zhang Qingli, Reporters' Notes [记者观察], Issue 224, September 2007 Issue 20, September 2007, available (in Chinese) at: www.jzgczz.com.
- ² For an account of the trends of tightening control over religious practice and its impact on Tibetan religious identity, see the report: 'The Communist Party as Living Buddha: The Crisis facing Tibetan religion under Chinese control', International Campaign for Tibet, April, 2007, available at: www.savetibet.org.
- ³ 'Tibet tourism "hits record high"', BBC Online, December 17, 2007, available at: www.bbc.co.uk.
- ⁴ Estimate by the TAR Reform and Development Commission, cited by Xinhua on December 22, 2007. The same report stated that there is a total population of 2.08 million in the TAR, and said the surge in tourism is due primarily to the new railway.
- ⁵ Congressional-Executive Commission on China (CECC), Annual Report, Tibet: Special Focus for 2007, available at: www.cecc.gov.
- ⁶ 'The statement of His Holiness the Dalai Lama on the 48th anniversary of the Tibetan National Uprising Day', March 10, 2007, available at: www.tibet.net.
- ⁷ 'The western development strategy and China's ethnic problems' [西部大开发与我国民族问题], June 1, 2000, Seeking Truth [求是], Li Dezhu [李德洙], available (in Chinese) at: www.qsjournal.com.cn.
- ⁸ CECC Annual Report, 2004, available at: www.cecc.gov.
- ⁹ This is despite a commitment in the Constitution of the PRC, Art 4, that: "The people of all nationalities have the freedom to use and develop their own spoken and written languages, and to preserve or reform their own ways and customs". For a full analysis on the way in which REAL has undermined the protection of the Tibetan language, see the CECC Annual Report 2007, Tibet section, pp 19-21, available at: www.cecc.gov.
- ¹⁰ 'Qinghai and the Emergence of the West: Nationalities, communal interaction and national integration', Professor David S G Goodman, *China Quarterly*, Vol. 178, pp. 379-399, July 2004.
- ¹¹ *Ibid*.
- ¹² 'Tibet railway helps boost tourist numbers by 15%', Xinhua, May 5, 2007, available at: www.chinadaily.com.cn.
- ¹³ 'Lhasa to build mini Potala Palace amid tourist boom', Xinhua, March 14, 2007, available at: <http://news.xinhuanet.com>.
- ¹⁴ 'Tibet to the max', *Travel Trade Gazette Asia*, October 6, 2006, available at: www.ttgasia.com.
- ¹⁵ According to the China Tibet Information Center, by 2003, China Southwest Airlines had opened up 10 domestic air routes into Tibet, to Lhasa from Beijing, Chengdu, Shanghai, Guangzhou, Chongqing, Kunming, Xi'an and Xining, as well as one international route from Lhasa to Kathmandu. In 2006, one million passengers passed through Gonggar airport in Lhasa, constituting a 17% increase on the previous year.
- ¹⁶ Source as endnote 3.
- ¹⁷ 'China Falls for Tibet Chic', Matt Forney, *Time Asia*, January 29, 2001, Vol 157, No 4, available at: www.time.com
- ¹⁸ In the same article, Matt Forney writes: "At the Traditional Tibetan Medicine Hospital in Beijing, director Renwang Ciren spent a recent morning tending to the ailments of six air-force officers. He says 90% of his patients are Chinese, a vast increase over past years."
- ¹⁹ Reporter Lijia Zhang writes: "Scored yet?" That was the first question from several young adventurers crowded around a table at a bar in Lhasa, Tibet's colorful capital city. Between sips of yak butter tea, they trade

jokes and swap tales about their latest sexual encounters. These twenty-somethings on leave from city jobs could have been from anywhere in the world looking for spiritual enlightenment, romantic encounters, or both. But they were all from China, where such conversations and attitudes would have been unthinkable just a few years ago. [...] Apart from Lhasa, another popular pick-up place is Lijiang, in Yunnan province." See: 'China's sexual great leap forward', *The Observer*, November 4, 2007, available at: <http://observer.guardian.co.uk>.

²⁰'Tracks that form a question mark', Elizabeth Cook-Romero, *The New Mexican*, September 22, 2006, available at: www.santafenewmexican.com.

²¹*Ibid*.

²²*Ibid*. See also: www.asianart.com for information about the Gedun Choephel Artists Guild in Lhasa.

²³'Tibet Aims for Three Mln Tourists This Year', Xinhua, January 15, 2007, available at: www.china.org.cn.

²⁴'State Growth and Social exclusion in Tibet', Andrew Fischer, NIAS Press, 2005.

²⁵'It's paradise lost as tourists flock to Shangri-La', *Christian Science Monitor*, November 29, 2007, available at: www.csmonitor.org.

²⁶'Decline of Potala Palace', *China Rights Forum*, No 4, 2007, p 44, available at: www.hrichina.org.

²⁷Xinhua news agency reported that these were also the three most popular tourist sites in Lhasa last year. Combined, they received approximately 328,000 visitors in 2006, an increase of 62,000 from 2005. See: 'Certainties and suspicions as China marks first year of Tibet railway', Xinhua, June 30, 2007, available at: <http://news.xinhuanet.com>.

²⁸'Director of Potala palace in Tibet's capital rejects UNESCO preservation concerns', *International Herald Tribune*, July 20, 2007, available at: www.iht.com.

²⁹'UNESCO warns China to look after Forbidden City and Potala Palace', Agence France-Presse, July 6, 2007, archived by the Canada Tibet Association, available at: www.tibet.ca.

³⁰'Smuggled Recording from Tibet Urges UN to Protect Potala from Mishandling', *Voice of America*, February 7, 2004, available at: www.vo.com.

³¹Source as endnote 30.

³²Source as endnote 12.

³³'Protecting the Palace', Jing Xiaolei, *Beijing Review*, September 20, 2007, available at: www.bjreview.com.cn.

³⁴'Potala Palace receives more than one million tourists this year', *People's Daily*, December 18, 2007, available at: <http://english.peopledaily.com.cn>.

³⁵Source as endnote 12.

³⁶*Ibid*.

³⁷Qin Yizhi said: "With the opening of the Qinghai-Tibet Railway, more and more tourists come to visit the palace, but the ancient building with a history exceeding 1,300 years is becoming unbearable." Source as endnote 12.

³⁸'Tourism begins to overwhelm Tibet', Xinhua, 6 March, 2007, available at: <http://en.tibet.cn>.

³⁹The report stated that to meet this demand, TAR officials plan to construct a new 1300 km-long water pipeline increasing capacity from 350,000 cubic meters per day to over 830,000 per day. 'Tibet water supply to double by 2020', Xinhua, May 16, 2007, available at: <http://info.tibet.cn>.

⁴⁰'Callers decry impact of Tibet railway', Radio Free Asia (Online), July 31, 2007, available at: www.rfa.org.

- ⁴⁴‘Six great measures by the state to support the development of tourism in Tibet’ [国家六大举措支持西藏旅游业发展], December 18, 2007, Xinhua, available (in Chinese) at: www.xz.xinhuanet.com.
- ⁴⁵The same plans detail the development of areas along the Qinghai-Tibet railway as tourist destinations, while encouraging tourism in the areas of Lhasa, Nagchu, Golmud, and Xining as places that already have a tourism infrastructure. ‘Long-term tourism plan for Tibet’, Xinhua, July 20, 2007, available at: <http://info.tibet.cn>.
- ⁴⁶‘Lap of Luxury Coming to Lhasa’, Forbes, March 22, 2007, available at: www.forbes.com.
- ⁴⁷‘Lhasa Yungao International Hotel Company, Ltd Signs Starwood to Manage a Planned St Regis Hotel in Lhasa, the Capital City of Tibet’, March 19, 2007, available at: www.hotel-online.com.
- ⁴⁸‘St. Regis Resort, Lhasa — Opening December 1, 2009’, undated Starwood Hotels publicity material, available at: www.starwoodhotels.com.
- ⁴⁹‘Attracting visitors from all corners’, Anneliese O’Young, *South China Morning Post*, September 21, 2007, available at: www.scmp.com.
- ⁵⁰‘Laurence Brahm and his Tibet’, Xinhua, July 30, 2007, available at: <http://info.tibet.cn>. The website, one of the Chinese government’s main English language Tibet portals, softens the blow by describing Brahm as: “A genuine American layer [sic] but also a genuine ‘Chinese all-know’.”
- ⁵¹‘How much money is Tibet worth?’ [西藏值多少钱?], Bowen News, December 6, 2007, available (in Chinese) at: www.peacehall.com.
- ⁵²‘Please protect the holy land of the Tibetan plateau’ [请维护西藏这片高原圣域], Zhuang Liwei [庄礼伟], Nanfang Net, June 4, 2007, available (in Chinese) at: <http://tibet.cn>.
- ⁵³The Getty Conservation Institute nominated Tibet as its choice for the Forbes website list. www.forbes.com. May 30, 2007.
- ⁵⁴Source as endnote 24.
- ⁵⁵Wang Lixiong: ‘What impact will the Qinghai-Tibet railway have on Tibetan culture?’ [王力雄: 青藏铁路对藏文化有何冲击?], June 30, 2006, *Observe China*, available (in Chinese) at: www.observechina.net.
- ⁵⁶It is assumed the site was closed down due to content that may have been deemed sensitive by the authorities, who closely monitor all websites with input from Tibetan and Chinese writers.
- ⁵⁷‘Tibet: A Human Development and Environment Report’, Environment and Development Department, Department of Information and International Relations, Tibetan government in exile, December 2007, available at: www.tibet.net.
- ⁵⁸*Ibid.*
- ⁵⁹Such education for tourists can be remarkably effective: the US National Park Service, for example, simply urges visitors to America’s national parks to “leave no trace” of their visit, following the philosophy of the Leave No Trace Center for Outdoor Ethics, which provides a broad range of advice to travelers and tourists on how to minimize or avoid impacting the natural environment. As well as “leave no trace”, another motto promoted by the organization is “take only photos, leave only footprints”. For further information on the organization itself and for the advice it offers, see: <http://lnt.org>.
- ⁶⁰If you are going to Tibet, or know a friend who is, suggest that they read ICT’s alternative travel guide, ‘Interpreting Tibet: A political guide to traveling in Tibet’, available at: www.savetibet.org. The TGIE report states that in Germany, some tour operators ask their clients to take a course educating them about Tibet before they travel.



A new settlement site for Tibetan nomads in Darchen, in Ngari Prefecture (Chinese: Ali) in the Tibet Autonomous Region (TAR). The majority of Tibetans live in rural areas, and for centuries many have sustained themselves through a nomadic herder lifestyle, uniquely adapted to the harsh conditions and fragile ecosystem of the Tibetan plateau. But the implementation of Chinese policies to settle Tibetan nomads, and to resettle Tibetans in towns and villages, are now threatening the survival of a way of life that is integral to Tibetan identity as well as the livelihoods of Tibetan nomads. This means that one of the last examples in the world of sustainable pastoralism now faces extinction unless there is urgent change. Often the new settlements, like this one, are far from community resources.

IMAGE: ICT.

SOCIAL EXCLUSION AS A RESULT OF CHINA'S ECONOMIC POLICIES

Settlement, relocation and urbanization

“There were some prominent problems in the structure and the function aspect of prairie animal husbandry [...] such as [...] the conspicuous contradiction between grass and animals.”

— Du Xiaojun and Cheng Jimin, agronomists¹

“To ask whether China wants urbanization is like asking whether a person needs to eat.”

— Tang Jun, sociologist, Chinese Academy of Social Sciences²

Summary

TIBET'S NOMADIC LIFESTYLE is one of the last examples in the world of sustainable pastoralism. For centuries, Tibetan nomadic herders have made a sustainable living uniquely adapted to the harsh conditions of the Tibetan plateau. An estimated 2.25 million Tibetan nomads live with their herds on the plateau,³ migrating with their herds of yak, sheep and goats according to the seasons of the year, and producing wool, butter, cheese, yogurt and meat.

But the implementation of Chinese policies to settle Tibetan nomads, and to resettle Tibetans in towns and villages, threatens the survival of a way of life that is integral to Tibetan identity as well as the livelihoods of Tibetan nomads. The policies are also further threatening the survival of the rangelands and the unique biodiversity of the fragile high-altitude landscape.

Since the beginning of the Western Development Strategy in 1999–2000, the Chinese government has been implementing policies of settlement, land confiscation, and fencing of pastoral areas inhabited primarily by Tibetans, dramatically curtailing their livelihood. Thousands of Tibetan nomads have been required to slaughter their livestock and move into newly built housing colonies in or near towns, abandoning their traditional way of life. In the past three years the government program to settle nomads in Tibet appears to have been stepped up, with the arrival of the Qinghai-Tibet railroad adding further impetus to the implementation of these policies throughout Tibetan areas of the People's Republic of China (PRC).

The intent to end the nomadic lifestyle, imposed from the top-down in Beijing, applies throughout the PRC. Similar policies of moving Mongolian nomads off the steppe in

Inner Mongolia have been pursued since the 1950s.⁴ Kazakh nomads in northern areas of the Xinjiang Uyghur Autonomous Region (XUAR) were the subject of settlement policies instituted in the late 1980s, with over 80% of Kazakh pastoral families settled by 2000.⁵

In January 2007, Tibet Autonomous Region (TAR) Party Secretary Zhang Qingli described the policy of requiring nomads to give up their traditional lifestyle and grazing lands to live in fixed settlements or find other work as essential in building “a beautiful, new socialist countryside.”⁶ In Tibet, there is an added political dimension. The policies have been linked in the TAR to the Party’s political objectives of maintaining ‘stability’ and countering the Dalai Lama’s influence.

The ethos of the Western Development Strategy is to create conditions which will encourage poor rural workers to towns or cities, where they will apparently become workers and consumers in a new, ‘modern’, economy. The policies also give the authorities greater administrative control over people’s movements and lifestyles.

In some cases, the authorities claim that they are moving people from their land in order to protect the environment or to improve their way of life. But there is increasing concern that the imposition of Chinese urban and industrial models on traditional modes of production is increasingly leading to growing poverty and contributing to grassland degradation.

A key issue arising from the implementation of these policies is how nomads and farmers who have lost their land and livelihoods will make a sustainable living in future, particularly given that they are ill-equipped to compete in the job market with the increasing number of more skilled Chinese workers. Development agencies active in remote parts of Tibet have reported to ICT that resettled nomads seldom receive training in new skills, and few receive the promised subsistence rations. Many must take out loans to pay for housing or to fence in the land they are allocated. Often they have no access to health or social welfare.

Rangelands specialist Daniel Miller, who has worked in Tibet with nomads for more than a decade, says that the nomad settlement policies in Tibetan areas have resulted in a general downward spiral in the productivity of many areas, loss of biodiversity, and increased marginalization of nomads. He says: “Nomads and their pastoral systems have always been confronted with events that change their lives — droughts that wither grass, winter storms and livestock epidemics that wipe out herds, and tribal wars that displace people and their animals — but the changes nomads are facing



Nomad settlement camps are now under construction in many areas of eastern Tibet. This image shows a new settlement in the small town of Son mda' (Chinese: Qingshuihe) in Kham (present-day Qinghai Province). (August 2007.) IMAGE: ICT.

today on Himalayan and Tibetan rangelands are more profound and likely to have more significant, long-term implications on their way of life and the ecosystems in which they reside than any previous changes.”⁷

The scale of nomad settlement

Grasslands cover about 68% of the 1.22 million square kilometers of the TAR, as well as slightly more than 50% of Qinghai Province’s 720,000 square km, and vast swathes of western Sichuan and Gansu Provinces and northwestern Yunnan Province, totaling some 1.7 million square km (420 million acres; 656,000 square miles).⁸



With more than a hundred buildings and more than 200 residences, the Darlag nomad settlement camp in Golok is one of the largest and most ambitious projects in Tibetan areas of the relocation of Tibetan herders. (August 2007.) IMAGE: ICT.

The number of Tibetans affected by forced settlement or resettlement in towns and cities is not known but so far it runs into the hundreds of thousands, according to data from official reports and other available material. The implementation of Chinese policies of dividing up land, fencing pastoral land and settling nomads is well advanced in many areas of eastern Tibet, including the northern areas of Qinghai such as Golok (Chinese: Guoluo) and Jyekundo Tibetan Autonomous Prefectures, as well as parts of Gansu, Sichuan, and Yunnan Provinces, and the TAR. Qinghai Province, including Golok, led the way in insisting on fencing and sedentarization. Official reports quoted earlier in this section make it clear that the TAR and other Tibetan areas are following

this process.⁹ The map on page 115 of this report shows where these main areas of nomad settlement coincide with the remote grasslands the railway passes through en route to Lhasa.

To give an example of the extent of nomad settlement, according to official figures there are 148,000 nomad families in the TAR totaling more than 800,000 people, and 100,000 families have already been settled, a total of 540,000 people.¹⁰ These numbers could not be confirmed by sources on the ground. But they suggest that the pace of settlement has quickened since the period 2001–2004, when the TAR authorities relocated at least 48,000 nomads and settled them in fixed communities, according to the Congressional-Executive Commission on China's (CECC) 2006 annual report.¹¹

A late 2007 Xinhua report referred to plans in Nagchu Prefecture (Chinese: Naqu) in the TAR, a main hub of the railroad, to settle 80% of the nomads by 2009. Xinhua reports: "Tibet will invest 590 million *yuan* (US \$80 million) to make 80% of Naqu Prefecture's nomads say farewell to the pastoral lifestyle of 'living where there's grass and the water, wandering hither and thither', and moving into economic, safe and practical new homes. Naqu Prefecture is a major pastoral area in Tibet. Due to the restrictions of traditional pastoral production methods and long periods of mobility, economic development in the pastoral industry has been sluggish. In recent years, Tibet has been actively implementing industrial structure reforms in Naqu, grassland responsibility systems, speeding up county-town planning and small-town urban construction. This has effectively promoted Naqu's rapid economic and social development. In particular, with the opening of the Qinghai-Tibet railway and with more than two thirds of the railway in Tibet being in Naqu, an economic belt is slowly developing along the railway line."¹²

Official figures for the numbers of nomads being settled elsewhere on the plateau are similar in scale to those for the TAR. For instance, Sinologist Dr. Susette Cooke notes that: "Official statistics put Qinghai's nomad settlement rate at 89% in 2005, meaning about 100,000 families — almost half the provincial Tibetan population, and a smaller proportion of its Mongols.¹³ A former Tibetan nomad who is now living and working in the West told ICT that local sources could not confirm settlement taking place at such speed, but that this might mean that the provincial authorities ordered local officials to carry out these policies: "Local officials are kept in the dark and most of them remain oblivious to such policies right until the last moment."

In 2006 the TAR government, launched a plan to move Tibetan farmers and nomads into new housing, and 56,000 households with 290,000 members were moved into new houses.¹⁴ According to the CECC, the total number of Tibetans moved into new

housing by 2010 could be approximately 1.14 million — more than half of the total number of Tibetan rural residents in the TAR at the time of the 2000 census.¹⁵

TAR Party Secretary Zhang Qingli says that the policies were essential not only to promote economic development, but also to counter the Dalai Lama's influence in Tibet: “[Farmers and nomads] ‘living and working in peace and contentment’ is the fundamental condition for us in holding the initiative in the struggle against the Dalai clique.”¹⁶ His comments apparently reflect the authorities' view that if Tibetans become richer, their faith in religion and the Dalai Lama will fade. This has not happened in Tibet.¹⁷ It also indicates the official line of ensuring political ‘stability’ through countering ‘separatism’ through development.

The same Tibetan former nomad told ICT that he believes this to be the key objective of the Party's policies on nomad settlement, saying: “Nomads remain beyond the reach of the state. Their economic self-sufficiency, mobility and traditional and religious outlook on life make them the most difficult people to integrate into the Chinese state.”

Zhang Qingli called upon the Party to support measures to ‘actively organize’ Tibetan farmers and nomads to move to towns or urban areas to find employment, set up businesses, or seek training in other skills.¹⁸

The relocation of Tibetans as ‘ecological migration’

Chinese officials often state they are moving people from their land in order to protect the environment, a form of resettlement known as *shengtai yimin* or ‘ecological migration’. This is the “most effective way to restore land to a healthy state,” said one official involved in the policies.¹⁹

But increasingly, Chinese, Tibetan and Western specialists are highlighting the impact of the undermining of land tenure systems and culture as a factor in the environmental degradation of the Tibetan rangelands, as well as grasslands elsewhere in the PRC. Far from being environmentally friendly, the consequences exemplify the damaging impact of the imposition of Chinese urban and industrial models on traditional and sustainable modes of production in rural Tibetan areas.

The ‘three rivers area’ in Golok Prefecture in Qinghai Province, where the Yellow, Mekong and Yangtze Rivers all rise, illustrates the scale of ‘ecological migration’: since 2003, the authorities in this area have resettled 28,000 people and constructed 14

'migrant urban districts' to carry out the policy of 'concentrated settlements'.²⁰ In late 2004, the government announced that it planned to move 43,600 people out of the same area, to turn its central zone into a "no man's land" (Chinese: *wuren qu*).²¹

The New York-based human rights advocacy organization Human Rights Watch states of the policies: "That China is facing multiple environmental crises is not in dispute, nor is the reality that poverty remains significantly higher in the western part of the country. But the causes of these crises and the validity of official measures supposed to address them certainly are. And the commitment to environmental protection must be questioned, given the government's enthusiasm for infrastructure development projects, such as mining, in the very same areas. Even assuming the government has had valid environmental or other reasons for relocating Tibetan populations in certain circumstances, moreover, the relocations often have not been carried out transparently, with the advance consultation and post-relocation compensation required under both domestic and international law."²²

One 'ecological migrant', Zhou Qiong, told *China Development Brief*: "I don't know anyone who has found a job. My husband and I stay home every day and do nothing. Life is very boring now. The government money is not enough to buy fuel or food for a year. I cannot speak or read Chinese so it is impossible to find work. I am afraid that we will starve." *China Development Brief* reported that while wealthier neighbors and relatives have been able to make up for shortfalls as a result of losing the family's livelihood, all recognize that this is unsustainable. "We can't live on charity forever," says Zhou. "These government policies designed to achieve 'ecological restoration' have turned Zhou and her neighbors into state dependents," reported the newsletter.²³

International development agencies reported to a conference in Sichuan on poverty reduction that nomads "had been coercively removed, excluded from their rangelands and made to settle in rows of houses in rigid lines far from the watershed, with no livelihoods, little compensation and nothing to do but watch television".²⁴

The policy of moving nomadic pastoralists to towns and cities from the rangelands where China's great rivers begin is known as *tuimu huancao*, meaning literally, 'withdraw from pasture to re-grow grassland'.²⁵ Qinghai is at the forefront of this policy, which is based on the assumption that rather than re-vegetating degraded pasture cooperatively with state finance and nomadic labor as partners, the only way to grow grass and conserve watersheds is by grazing bans that exclude animals for three to five years, or by excluding the nomads altogether, ending a way of life that was practiced sustainably for many centuries. The new policy assumes nomads are destructive of



In the Tibetan area of Kham, the authorities have enforced the growing of shrub bush in fields that would otherwise be used to grow a sustainable crop. They describe this as 'ecological protection'. Local people are given bags of rice as compensation for not planting barley. Although this project does not involve relocation, it does ultimately alter socio-economic patterns in the area, and encourages Tibetans to enter the Chinese market and cash economy of the local urban settlements as they are not growing a sustainable crop. IMAGE: ICT.

the resource — grassland — that has sustained them over the generations. The policy invests little in re-sowing native grasses, although the pastoral areas of Tibet are in urgent need of such investment.

A December 2007 report in the official press stated that 10.6 million *mu* (706,666 hectares) of grassland has been converted to '*tuimu huancao*' in Qinghai Province, with 1.9 million *mu* (126,666 hectares) re-sown.²⁶

Another linked policy is known as 'withdrawing farmland and renewing the forests' (Chinese: *tuigeng huanlin*), involving tree-planting on marginal farmland to reduce the threat of soil erosion.²⁷ According to Human Rights Watch and other sources, in Tibetan areas this has been used to justify arbitrary land confiscation, requiring farmers both to provide labor and other inputs for tree planting, and to seek alternative livelihoods.

Another form of 'ecological protection' the authorities have taken in certain areas of Kham is to enforce the growing of shrub bush in fields that would otherwise be used to grow a sustainable crop. Local people are given bags of rice as compensation for not planting barley. Although this project does not involve relocation, it does ultimately alter socio-economic patterns in the area and encourage Tibetans to enter the cash economy of the local urban settlements as they are not growing a sustainable crop. Reports received by ICT indicate that these programs have been in place since 2002 in Derge and Serthar Counties (Chinese: Dege and Seda) in Kardze Tibetan Autonomous Prefecture (Chinese: Ganzi TAP) in Sichuan, and in neighboring Jyekundo County across the boundary in Qinghai Province.

A visitor to the region who photographed the scrub brushes growing in place of barley and who spoke to local officials told ICT: “In 2002, the central government decided that shrubs and trees should be planted instead of crops in many areas of Sichuan. The directive was received from the Forestry Department in Derge. It is because there is already enough crop production in China and people in this area can simply buy crops from stores instead of growing it themselves. The [Forestry Department] told local people that this policy was because their agriculture was not productive enough and that it added to the siltation problem in the Yangtze River. The government believes that this leads to flooding in the rivers in China.²⁸ Instead of planting their inefficient barley fields, they can plant bushes that are provided for them and then they could have rice. In fact the bush does not really grow in the valley because of the altitude and soil.”

The same source gave an insight into the way such directives are implemented, quoting a local official as saying: “We tried to do this in a similar way that we implemented the directive from the central government to utilize fencing in 1998 and 1999. We communicated to the locals how to do this in monthly *shang* [township] meetings in the communities themselves. At these meetings, the locals will learn of ways the central government is helping them, and we can issue policy at that time as well. We have a problem though in that we give the locals the directive but we do not really manage it afterwards. We would like them to tend to the fences afterwards but as you can see, the fences now are sort of lying here and there. Actually the young people it seems would like this as they don’t have to work in the fields and can spend their time in school which will thereafter be able to get them a job in the larger cities where they don’t have to stay in the dirty villages.”

THE RAILWAY’S ROLE IN INTENSIFICATION OF THE ANIMAL HUSBANDRY INDUSTRY

Officially outlined plans for future meat production indicate the trend of policy on pastoralism. In future, it will no longer make extensive use of large areas of Tibet but will be ‘scientifically’ concentrated in small areas close to cities. This policy came into being partly because of persistent disappointment that the nomads of the grasslands seldom became commercial meat producers for the immigrant urban market.

The railroad is an integral part of this plan to intensify the animal husbandry industry. Certain areas close to cities are reserved for intensive animal fattening, with areas somewhat more rural reserved for fodder crop production to feed the penned animals. As for the vast grasslands, they do still have a role to play in animal

production, but only as animal rearing areas, during the early stages of the life of an animal destined for slaughter. The grasslands too are reduced to a defined, specialized role. The only animals needed on the grasslands will be young. As soon as they reach full adult size, they will be sent by rail or truck to feedlot fattening pens, then to slaughter houses. Meat production will be industrial, rational, efficient and productive. The grasslands need no longer hold so many animals on the hoof, eating grass. The only adult animals required are the breeders, or those kept for milking or wool.

Development specialist Gabriel Lafitte says: “No longer is meat production to rely on extensive land use, or the mobility of nomadic pastoralists maximizing the seasonal use of mountain meadows in summer and lower pastures in winter. The strategy is to separate animal production from the land, concentrating it instead in feedlots where penned animals are fed grains grown for the purpose. This intensification of production concentrates the environmental impacts, the energy intensity and capital intensity of animal production into small areas close to city markets, making the vast rangeland largely redundant, available for other productive purposes such as guaranteeing downstream water supply. Since nomadic pastoralists are largely redundant, their labor can be made available to the growing sectors of industry by resettling them in new urban centers.

“What China at first saw as empty, unproductive land is now being officially emptied, its stewards themselves herded onto new towns with no urban skills, little literacy, and nothing to do, forbidden to live with and rear animals on the move with the seasons. As the land is emptied, it is now deemed more productive.”²⁹

Professors Zhao Haoxin and Chen Yuxiang, contributors to a 2004 conference in Lhasa on sustainable development in mountainous areas, summarize the new policies of ‘modernization’ as follows: “Transform grassland agriculture. Pen-feeding or semi-pen-feeding with concentrated feed as supplementary feeding, wherever possible, is to be encouraged. The animal husbandry sector will be reformed and optimized. The goal is to form a pattern of breeding on pasturelands and fattening in farming and semi-farming areas. In order to protect pastures, the amount of livestock on hand will be scientifically regulated. In recent years, in order to improve the productivity and living conditions of farmers and herdsmen, the government has supported projects of ecological migration, herdsmen’s settlement, and drinking water supplies. To be out of the plight of poverty and be affluent is the dream of human beings.”³⁰



Towns and areas in Tibet where nomadic families are known by ICT to be subject to settlement policies. This is not a comprehensive overview of nomad settlement in the area; several of the main areas are singled out for this map. WITH THANKS TO HUMAN RIGHTS WATCH.

'Official documents testify to the 'problems' still apparent in this approach. An internal work report obtained by ICT from the eastern Tibetan area of Lithang (Chinese: Litang), in the Tibetan area of Kham, frankly admits that the new policy has failed to achieve any increase in the income of nomads. The report, dated May 2006, and addressed to the members of a committee of the local county, states: "Although we have made great progress [in the work], there are still some problems existing: (1) Difficulties in adjusting the structure of agriculture and animal husbandry; incapability of increasing the income of the masses; [...] (3) Low economic returns due to the lack of animal husbandry techniques".³¹

Without consultation or consent: The exclusion of Tibetans from decision making on resettlement

A Human Rights Watch report on nomad settlement concluded that for the affected populations, current government policies often result in greater impoverishment, and — for those forced to settle — dislocation and marginalization in the new communities they are supposed to call home. "At a minimum, what is happening to these Tibetan communities is a further example of China's economic development drive

taking place with scant regard for the interests of individuals and communities, including the rights of the affected individuals.”³²

Resettlement policies are generally implemented without consultation or consent, and local people have no right to challenge them or refuse to participate. This is despite the fact that Chinese law requires that those who are to be moved off their land or are to have their property confiscated must be consulted, and, if they are moved, compensated for their losses.³³

Chinese scholars have noted the lack of legality surrounding the settlement of nomads, stating that the policies have been marked by “insufficient legal involvement”, “a lack of legal knowledge from all the parties”, and that “government departments have an insufficient knowledge of the law”.³⁴

Some nomads are offered compensation packages when they are settled. For some, with no rangeland and negligible job prospects, their main concern is how long the compensation package will last. Many of the payments are insufficient; Human Rights Watch quoted a former Tibetan nomad who had escaped into exile from Machen (Chinese: Maqin) County in Golok Prefecture in Amdo as saying: “They didn’t give food or money allowance. Relocated families complain that their life is hard because now they have to buy everything, even meat and dung fuel for the stove.”³⁵

Another former Tibetan pastoralist from Kham said: “The township leaders encourage people to do business and change their way of life but many Chinese have come to Tawu County town [Chinese: Daofu, in Sichuan Province] and the township centers. [These Chinese settlers] have opened shops and restaurants and are overseeing house and road construction. Tibetans cannot match them in competition because, first, they have more capital; and second, they have experience and know well how to deal with government leaders. [...] Some of the households who resettled near our township center have opened shops and restaurants, and since there are many people traveling through who buy goods and eat, they manage to earn a living, but in the future they will have problems, because so many Chinese migrants are settling in the county town and the townships also, and since they have far better skills, I think the Tibetans will lose out.”³⁶

An integral part of settlement in many areas is the instruction to nomads to sell off or reduce their herds of livestock, which traditionally represent the wealth and livelihood of a nomad family. Nomads use the term ‘*nor*’ for their herds, which is literally translated ‘wealth’, but which conveys the meaning of a value in its own right, and not

necessarily something that can be converted into cash. “Traditionally, the wealth of the rangelands was its abundance of butter and wool,” the Tibetan Government in Exile (TGiE) reports in its study, ‘Tibet: A Human Development and Environment Report’.³⁷ The requirements vary from area to area; Human Rights Watch has reported differing examples, from nomads being allowed to keep just five head of livestock and leaving the rest to be slaughtered or to die, others being allowed to keep “30% of their herds” and others being forced to get rid of all their animals.

The consequences of settlement of nomads

One of the main impacts of the settlement of nomads has been a loss of social cohesion engendered by the traditional communal nomadic lifestyle. Unemployment faced by nomads who have lost their livelihoods, and often their livestock, is leading to community and family breakdowns, alcoholism, and crime.

According to one rural development expert who has worked extensively in Tibet, the overall picture is of an increasing amount of herding households subsisting in critical conditions. Michele Nori, an agronomist and expert on rural development in areas of grasslands, reported from Jyekundo Tibetan Autonomous Prefecture in Qinghai Province, part of the Tibetan area of Kham: “The current situation on the ground is [...] of a huge number of herding families with limited livestock resources, low livestock productivity, high levels of indebtedness and limited options to tackle any of these problems. All this leads to increasing levels of vulnerability and poverty.”³⁸

The difficulties faced by resettled Tibetans are not generally highlighted in the official press, but a recent article by a Chinese reporter taking a journey on the railroad from Qinghai to Lhasa gave details of the problems faced by some villagers resettled at a lower altitude as part of a scheme that the authorities described as protecting the source areas of the rivers that supply China’s water.

The journalist for *China Daily*, Raymond Zhou, reported that the livelihoods of villagers who had been moved from the mountains to a lower-lying area were uncertain: “Farming is out of the question as the high salt content of the land makes it unusable for farming. Large swathes of Qinghai’s land are salted. [...] Working in the city requires skills and language proficiency [meaning Chinese language proficiency], something a Tibetan herdsman is not equipped with. ‘We train them to be welders and drivers, but it’s much more difficult than we expected,’ said Zhang Xianlin, the chief in the new village in a suburb of southern Golmud, the industrial city at the Qinghai end of the

newly-built section of the Qinghai-Tibet railway. Young men who can speak Chinese have gone to big cities in search of better jobs. Those left behind have a harder time adapting to the new working conditions.” The article describes how the manager of a weaving factory had to teach Tibetan women to count from one to 10 in Chinese.³⁹

The Chinese authorities represent the policies as having an entirely positive impact, and Western journalists on official visits to Tibet have been routinely taken to visit homes where local people have been settled.⁴⁰ Journalists who report on negative consequences for Tibetans can fall afoul of the authorities. McClatchy correspondent Tim Johnson, who traveled to Tibet unofficially in May 2007, and described the resettlement project as a “massive campaign that recalls the socialist engineering of an earlier era”, was called into the Foreign Ministry and told that his writings “were not true and ‘unacceptable’ to the Chinese government”.⁴¹

Fencing the grasslands

Traditionally, Tibet’s grasslands were unfenced, allowing complete mobility for both nomads and their livestock. Nomads practice seasonal migration, which allows sufficient time for the replenishment of the pastures. Their migratory sequence ensures that the best forage is available to their livestock and ideally enables livestock to lay down the necessary fat stores to help them survive the long and bitter winter.⁴²

The key characteristics of traditional pastoralism are mobility and diversity. Nomads traditionally raise different animals, adapted to the harsh conditions of the plateau. The raising of yaks, sheep, goats and horses together maximizes the use of rangeland vegetations, and nomads know which soil, slopes, streams and grasses will support an appropriate mix of animals.

According to a report by the TGiE, “Tibetans traditionally have an intuitive respect for the natural limits of what the land can sustain. They generally value the ‘precious earth’ as the basis for all life and the direct source of food, shelter and livelihood. Rather than trying to conquer nature, Tibetans have adapted their lifestyles to natural conditions. They are not driven by greed or a constant urge for increased yield, but by the needs of this generation and coming generations to survive — which means, in modern language, sustainability.”⁴³

A Western expert⁴⁴ told ICT: “In many areas, particularly in Kham, huge bales of fencing wire are dropped off in the middle of the grasslands by trucks. In many areas, the



Hundreds of miles of pastures in Tibet are now fenced with barbed wire under the authorities' plans to enclose the grasslands and settle nomadic herders, as seen here in Serthar County (Chinese: Seda) in Sichuan Province. (July 2007.) IMAGE: ICT.

nomads who were being settled and having their land fenced off not only had to pay for the fencing [at 70 *yuan* — US \$9.50 — per mile] but also had to put the fences up themselves. I asked some local people why they thought the government was instituting these policies. They said that they felt it was all about control of the local population, through limiting their movement.”

Tibetans who are settled often have to go into debt — without having an assured future livelihood, as often they have lost their livestock — to pay for part of the cost of housing or the fencing that will divide and enclose the grasslands.

In many cases, nomad settlements are constructed along roads, far from urban settlements or any community facilities. The same traveler told ICT: “I watched one settlement being built in an area of Kham in eastern Tibet in 2005 — the same characterless,



The Chinese authorities are implementing a policy of fencing off grasslands in many areas of eastern and central Tibet, as part of their intention to settle nomads and end the nomadic lifestyle. For a very low compensation (around 70 *yuan* or US \$9.60 per km) Tibetan herders are often required to erect fences themselves in order to limit the mobility of their livestock. This image was taken in Kham, eastern Tibet, and depicts bales of wire that have been left in the grasslands for herders to fence off the pastures. (August 2007.) IMAGE: ICT.

featureless concrete houses, without electricity or water, before local nomads were moved there. When I visited again in summer 2007, every house was empty. The settlement had simply been abandoned. People had just left, to go to the town, or, if they could, back to their herding lifestyles, which is not possible for everyone. The settlement policy simply hadn't worked — the only people who benefited were those who were paid for the construction.”

Disputes lead to deaths as result of nomad policies

Fencing began in the eastern Tibetan area of Amdo in the early 1990s, and according to Tibetan sources, has led to over-grazing and grassland degradation as families had to

graze their animals on the allocated land all year round. This led to an increase in disputes not only between different tribes of nomads but also between neighbors within these tribes.⁴⁵

As grazing areas elsewhere, too, become scarce, disputes among Tibetan nomads are on the rise. These disputes have their roots either in undefined historical territorial demarcations between tribes or the Chinese government's division of land between tribes, which disregarded traditional boundaries. The government's pasture allocation system is often unfair, with some nomads receiving land with access to water, and others not.

Arguably Beijing's top-down approach to implementing policy has undermined traditional means of resolving these conflicts through the involvement of local figures of influence, such as Tibetan lamas. In some areas, this appears to be changing. The scholar Fernanda Pirie has found that in areas where township and county leaders are mostly Tibetan, the government authorities seem to be aware that feuds among nomads cannot be resolved by criminal punishment, and ask senior Buddhist lamas and the nomads' own mediators to intervene.⁴⁶

Even so, Chinese developmentalists and scholars have pointed to the dangers of these disputes. A 2006 study by the scholars Lijia Caidan and Yang Hude concluded that: "If we cannot find an effective way to solve these problems, then the disputes over grassland brought by the worsening of the environment may double, and could seriously influence the social and political stability of Qinghai and even of the entire north-west regions."⁴⁷

'They have forgotten more than many scientists will ever learn': The nomadic heritage and official perceptions

The settlement policies emerge from half a century of bias in Chinese policy towards the urban over the rural, mining over herding, industry over subsistence, and migrants over the indigenous population.

Fundamentally, the Chinese authorities regard nomadic pastoralism as 'unscientific' and in need of modernization. The purposeful and considered moving of herds from one seasonal pasture to another is regarded as "wandering"; herd structures based on generations of experience are regarded as "uneconomic" or "irrational", and nomads themselves are regarded as "backward" and "ignorant".⁴⁸



Bales of fencing wire to enclose sections of grassland at the Department of Forestry in Serthar County (Chinese: Seda) in Sichuan Province. (August 2007.) IMAGE: ICT.

Analysts point out that the very concept of nomadic pastoralism on open rangelands is anathema to the Chinese worldview. As the writer Dee Mack Williams has pointed out: “Chinese rangeland policy initiatives are informed by a long history of antagonism to the grassland environment and its native inhabitants. For centuries, Chinese literati viewed and described neighboring mobile populations and their homelands in the most disparaging terms. These derogatory Confucian attitudes were only strengthened by Marxist orthodoxy after 1949 [and the Communist revolution]. The Marx-Lenin-Mao line of political philosophy viewed nomadic pastoralism as an evolutionary dead end standing in opposition to national progress, scientific rationalism, and economic development. Mainstream Chinese intellectuals in the reform era still consider the land and people to be ‘in the way’ of modernization — obsolete and disposable in their traditional composition.”⁴⁹

The Chinese authorities often attribute grasslands degradation in Tibetan areas to the ‘unsophisticated’ practices of Tibetan nomads. This perception, which focuses solely on the importance of economic development and depicts the rangelands as simply a resource to sustain livestock, leads to the marginalization of expert Tibetan views on

the management of the grasslands and does not take into account the values of indigenous pastoralists.

Rangelands expert Daniel Miller says: “The fact that numerous, prosperous pastoral groups remain [in Tibet] to this day bears witness to the extraordinary knowledge and animal husbandry skills of the nomads. [This is a demonstration] of the rationality and efficacy of many aspects of traditional pastoral production as a means to convert [...] rangelands into valuable animal products in an environment where cultivated agriculture is not possible. Nomads should be considered as ‘experts’ even though they may be illiterate. Some old Tibetan nomads have probably already forgotten more details about rangelands and yaks than many young scientists will ever learn. Tibetan pastoralists offer an opportunity to learn more about a way of life that is fast vanishing from the earth.”⁵⁰

Miller says that the ecological knowledge and animal husbandry skills of nomads are often not well recognized by scientists and development planners working in Tibetan areas. As a result, nomads have often been left out of the development process, with neither their knowledge nor their needs being considered by the authorities in the introduction of more ‘modern’ and ‘scientific’ methods of livestock production.

Chinese researcher Wu Ning, from the Chengdu Institute of Biology with the Sichuan Academy of Science, says that there is a clear need to raise public awareness concerning nomads’ indigenous knowledge systems in the conservation of biodiversity and sustainable use of natural resources. Wu Ning writes in a paper on biodiversity in Sichuan: “The indigenous knowledge of nomads should be scientifically investigated so that they can be integrated in the practical planning and implementation of development projects.”⁵¹

Tackling grassland degradation and protection of biodiversity: A new message from Tibetan communities and Chinese environmentalists

“People aren’t afraid of transport links and material goods. What they’re afraid of are the effects these things can have on people and nature. Community management, and the research that goes along with it, can help foster a spirit of public works, and help to slow down or prevent community breakdown.”

— Lu Zhi, the head of the China office for Conservation International and a professor of conservation biology at Beijing University⁵²

According to rangelands experts, the Chinese policy of settling nomads goes against state-of-the-art information and analyses for livestock production in pastoral areas. Daniel Miller, an expert on rangelands, says: "This body of scientific knowledge champions the mobility of herds as a way to sustain the grazing lands' and nomads' livelihoods. Decades of experiences with livestock development in other pastoral areas of the world and considerable recent research in Asia, including Tibetan areas, all lead to the conclusion that settling nomads is not appropriate. Livestock mobility should be encouraged instead of eliminated and nomads should be empowered to manage their own rangelands."

There is an increasing consensus among Chinese, Tibetan and Western scholars about the importance of working with, rather than against, the knowledge of indigenous pastoralists. Chinese scholar Wang Xiaoyi, from the Chinese Academy of Social Sciences, says that after years of investment to tackle desertification in Inner Mongolia, for instance, which is home to one of the world's largest grassland areas and most complex eco-systems, there is no sign of degradation coming to an end or even slowing. Another Chinese scholar, Liu Shurun, who studies grasslands and their people, said: "Why has so much effort achieved so little? Is it because the underlying policy is wrong?" Liu Shurun advocates a return to the nomadic style of living and production.⁵³

Chinese scholars questioning the resettlement policy point to Beijing's failure to recognize key differences in the management of farmland and rangeland. "Chances are the original way of living and production had their value and rationale in maintaining a more sustainable ecosystem that is destroyed by the agriculturalization and industrialization of the grassland," says Wang Xiaoyi.⁵⁴

Some government officials have acknowledged the concern of scholars and NGOs on management of the rangelands, and the issue is due to be raised at a parallel meeting to the 16th International Union of Anthropological and Ethnological Sciences Conference to be held in Kunming in July 2008.⁵⁵

According to grasslands specialists, livestock must be mobile to prevent degradation of the environment and to maintain rangeland health, the basis of extensive grazing systems throughout the world. The harsher the environment, the further the nomads must move to acquire forage for livestock. Fencing of land can prevent this mobility among livestock, leading to degradation of the grasslands. Wu Ning, from the Chinese Academy of Sciences in Chengdu, writes in his paper on biodiversity: "There is the principal requirement to ensure the maximum possible geographical mobility for nomads, because the dispersal of animals limits the pressure of grazing on any one

pasture at one time and is the only way of guaranteeing the greatest degree of conservation of biodiversity.”⁵⁶

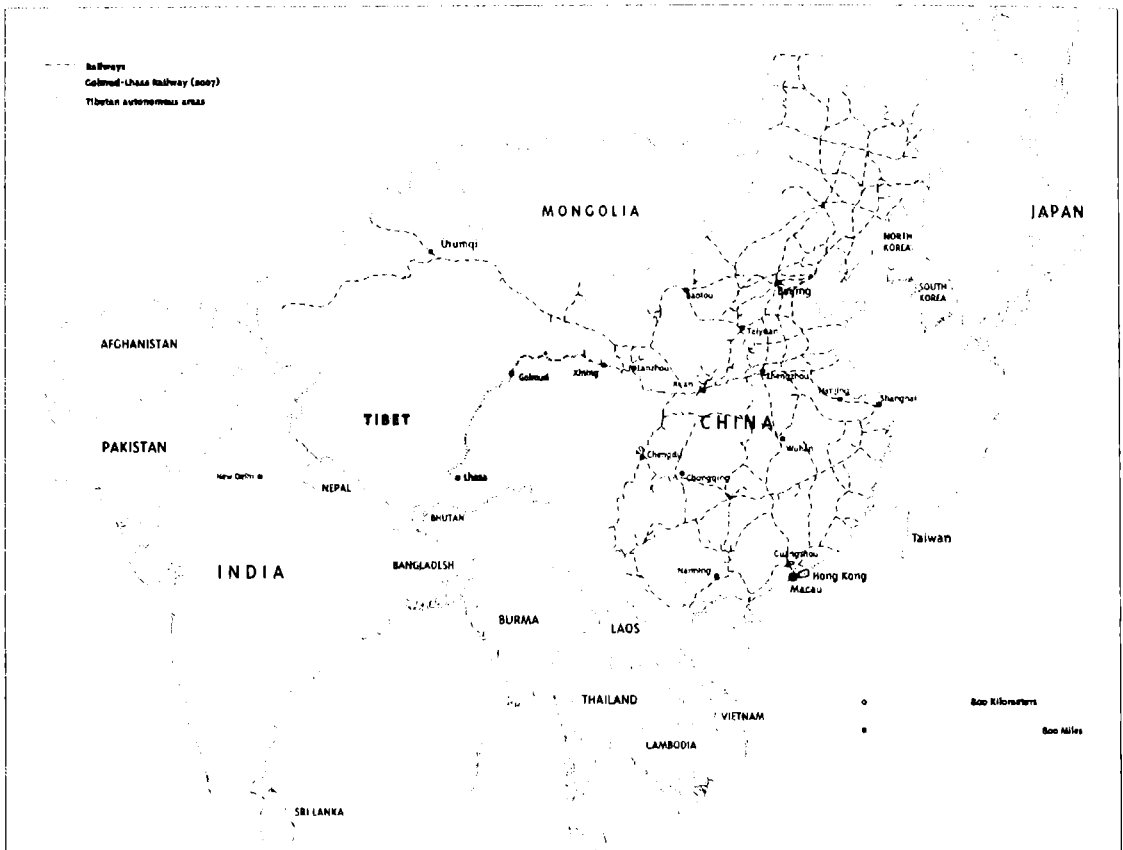
American naturalist George Schaller referred to the difficulties faced by nomads in one area of Qinghai he visited in 2006 as being representative of larger issues on the Tibetan plateau: “Living conditions are worsening. Springs are drying up, and the water tastes bad. Sandstorms come more frequently and are more violent, and the weather is more unpredictable. Turf layers on the hills are breaking up and sliding down, leaving large bare spots. Gold mining destroys whole drainages. Pastures that once supported 1000 sheep now feed 100. At least a third of the rangelands are considered degraded. Families are moving away to find better pastures or are being resettled in towns by the government.”⁵⁷

Some environmental NGOs and forward-thinking officials are attempting to improve the degradation of the grassland by involving the local community. An article on the China Dialogue website, which is dedicated to issues of environmental protection in the PRC, reported on the work of the deputy secretary of a local environmental protection committee, Haxi Zhaxiduojie, who has won an award from China Central Television for his work on behalf of environmental protection and the local community in the herding village of Tsotri (Chinese: Cuochi) in Qinghai Province.⁵⁸ China Dialogue reports that the community has sought to learn from the skills of local nomads, “who are highly sensitive to their environment; they have accumulated far more knowledge than us about the environment over the years”, according to Wang Dajun, a professor at Beijing University School of Bioscience.⁵⁹

Professor Wang mentions learning to respect the role of species such as the pika, a small hamster-like mammal which has often been blamed by the authorities for grassland degradation. In some areas, the authorities have laid poison in an attempt to eradicate the pika. However, international scientific research has shown that pikas actually benefit the grasslands by aerating the soil when they burrow. Moreover, they are prey for several species of predator.

Lu Zhi, head of the China office for Conservation International and a professor of conservation biology at Beijing University, showed a similar respect for locals’ traditions and concerns when he said, apropos the railroad: “People aren’t afraid of transport links and material goods. What they’re afraid of are the effects these things can have on people and nature. Community management, and the research that goes along with it, can help foster a spirit of public works, and help to slow down or prevent community breakdown.”⁶⁰

RAILWAY MAP OF CHINA & TIBET



The opening of the Qinghai-Tibet rail lines marks Tibet's further integration into the Chinese transportation system. It is now possible to travel directly from Beijing to Tibet by rail. IMAGE TAKEN FROM THE ICT REPORT, 'CROSSING THE LINE' (2003).

A way forward

China has so far fallen behind in its efforts to stem the rate of grassland degradation and to promote ecological sustainability among the nomadic population. Rangelands experts say that the reasons for this failure are complex, but center around inappropriate policies. There is now growing awareness within the PRC that urgent action is needed to prevent further grassland degradation, preserve biodiversity, and sustain a unique pastoral way of life.

As this report has shown, the promotion of intensive livestock production and the settling of nomads have contributed to the conversion of grassland to cropland. Sedentarization of nomads and reduction in livestock mobility are also degrading the grasslands. Recommendations on stabilizing or restoring the grasslands cannot simply be an exercise in matching a technical solution with a physical problem — for instance, as

in tackling wind erosion by planting shelter belts on sand dunes. Grassland degradation can only be halted and reversed by examining the forces that affect the people who are using the grasslands. An action plan should be developed in order to address the real problem systematically.⁶¹

Rangelands expert Daniel Miller also recommends the development of a new ‘mobility paradigm’ that combines the indigenous knowledge of nomads with the scientific findings of outsiders. “An important message for pastoral policy-makers and planners is the need for active participation by the herders in all aspects of the development process and for empowered herders to manage their own development,” Miller writes. A new ‘mobility paradigm’, he suggests, would emphasize that livestock mobility is essential for sustainable development in the pastoral areas. The mobility paradigm would concede that houses, livestock shelters, and privately fenced enclosures for hay production and winter/spring grazing could be compatible with the new paradigm as long as livestock are allowed opportunistic mobility. There would also be a commitment to devolution, decentralization, and real participatory processes.⁶²

Analysts also say that there is a need to invest more in rangeland research in Tibet in order to guide policy and develop appropriate technologies. Research must be participatory, involving local Tibetans, if it is to be effective: sustainable rangeland use throughout western China depends on the local-level users of the land.

Experts particularly stress the need to involve women living in pastoral areas in finding solutions. As managers of the household, Tibetan women in nomadic areas make vital decisions about the use of natural resources and do much of the work of livestock production. Efforts should be made to ensure women’s access to credit where necessary, and to improve their educational levels.

Participatory research is vital in the context of the political drive to develop the western regions of the PRC. To date, many of the underlying socio-economic and ecological issues in pastoral areas have not been adequately addressed before development programs are undertaken. Experts with long experience of working with Tibetan nomads say that there is a real risk that the nomad way of life will be undermined, even destroyed, due to modern notions of development based on faulty evidence, negative stereotypes, and untested assumptions.⁶³

PERSPECTIVES: RURAL PLIGHT, RURAL FLIGHT

A young Tibetan woman from a semi-nomadic family gave ICT the following account of the challenges facing rural villagers.

“Basically speaking, our *shang* [Chinese: *xiang*, or township] is extremely poor. In the early years it was okay, but gradually the climate has been changing. We are semi-nomad families; our living depends on the sky and land. But in recent years it hardly rains and the land has started turning into desert, making it impossible for the crops to grow. Besides, the government divided the grasslands three years ago and each family could only get a small piece of grassland to herd the animals, which was not enough. The nomads can no longer have large numbers in their herds.

Even under such circumstances we still have to pay taxes: tax on land, tax on the number of family members, even including the tax on the number of trees a family has. It is a huge burden. A few years ago, when I was in Xining working in a hotel, I got a call from my family asking me to send some money to help them pay taxes because the harvest wasn't good that year, and they hadn't made enough to pay their taxes.

We pay a lot to the government, but we get nothing in return. It is said, though, that the taxes has have been reduced these days.

Gradually villagers in the county began to sell their lands and their herds, and now they have to go elsewhere to make a living. So we have no choice but to abandon our village. Young men and women in the village have gone to cities to look for a job. Some work as construction workers, while women mostly work in places like restaurants, etc. Now there are only some old people and children there, you can hardly see any young people in the villages.”

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- ¹ 'Analysis of Formation Causes of Grassland Degradation in Damxung County of Tibet and Its Exploitation and Utilization' [西藏当雄县草地退化成因分析及开发利用研究], *Anhui Agricultural Science* [安徽农业科学], Du Xiaojuan and Cheng Jimin [杜小娟; 程积民] July 2007, available (in Chinese) at: www.ceps.com.tw. The phrase 'contradiction between grass and animals' [草畜矛盾] is often used in academic and government reports on animal husbandry in Tibet and elsewhere in the PRC, to describe apparently insufficient grass resources for grazing.
- ² 'Big, Gritty Chongqing, City of 12 Million, Is China's Model for Future', *New York Times*, June 1, 2007, available at: www.nytimes.com.
- ³ 'Resettled Tibetans "can't live on charity forever"', *China Development Brief*, May 1, 2006, available at: www.chinadevelopmentbrief.com.
- ⁴ See for example: 'Let grass grow over it: overgrazing of grass steppe in Inner Mongolia', Breuer, L., Archer, N., Schneider, K., Huisman, J., Frede, H. G., *Spiegel der Forschung*, 2004 (Vol. 21) (No. 1/2), pp. 86–91.
- ⁵ See for example: 'Kazakh nomads, rangeland policy and the environment in Altay: insights from new range ecology', Tony Banks and Serik Doman, paper presented at the Second International of Asia Scholars, Free University, Berlin, August 9–12, 2001, available at: www.eldis.org.
- ⁶ 'Grasp the Two Major Affairs of Development and Stability, Promote the Building of a Harmonious Tibet', Zhang Qingli, *Seeking Truth*, January 16, 2007, quoted in the Congressional-Executive Commission on China 2007 Annual Report Tibet section, available at: www.cecc.gov.
- ⁷ 'Rangeland management in the Hindu Kush Himalayas: Himalayan and Tibetan Pastoralism', International Centre for Integrated Mountain Development, available at: www.icimod.org.
- ⁸ 'Searching for grass and water: Ecosystem sustainability and herders' livelihoods in western China', Daniel J. Miller, 2007, forthcoming paper kindly supplied by the author.
- ⁹ Initially, China hoped an increase in production could be achieved purely by human will, by persuading large numbers of young volunteers to go to Tibet, produce oil in the Tsaidam Basin with almost no tools or equipment; make deserts bloom; feed the masses and produce modernity in the arid badlands. That experiment failed. Greg Rholf writes: "The high hopes of a booming economy that might have helped to support the farms during their start-up phase came to nothing. The envisioned oil refineries, technical institutes, centrally-heated apartment blocks, and railways in bustling cities in the high desert of the Chinese west in effect vanished before they had even appeared. Some oil was found and pumped from the ground, but there was little provision for transporting and refining or even storing it. When one team struck oil, they simply pumped it into a depression, where it formed a 'lake' that fooled unfortunate ducks — an episode that captures the hastiness and technical limitations typical of China's westward expansion in Qinghai." (See: *Dreams of Oil and Fertile Fields: The Rush to Qinghai in the 1950s*, Greg Rholf, *Modern China*, Vol. 29, No. 4 (Oct., 2003), pp. 455–489.) The lesson China eventually learned was that the implanting of modernity and productivism could not be achieved by sheer will. It required a more organized, mobilized, top-down effort directed by the state, a quasi-military organization capable of producing modernity in the 'waste land'. This effort required no involvement of the local population, who were manifestly 'backward'. This approach of bringing all that is needful to insert full modernity into a remote area is known in Chinese as a 'production base.' The ideology of the production base has remained a constant since the 1960s, and is still in force today. A railroad is a key element of that 'production base'.
- ¹⁰ 'Naqu [Nagchu] plans for 80% of nomads to have left the pastoral life in two years' [那曲计划 8 成牧民两年后告别游牧生活], *Xinhua*, September 8, 2007, available (in Chinese) at: www.xz.xinhuanet.com.
- ¹¹ 'Government Campaign to Settle Tibetan Nomads Moving Towards Completion', CECC China Human Rights and Rule of Law Update, November, 2005, available at: www.cecc.gov. See also: 'More Nomadic Tibetan Herders Settle Down', *Xinhua*, September 2, 2004, available at: www.xz.xinhuanet.com.

¹²Source as endnote 10.

¹³'Qinghai: Settling the Nomads', Susette Cooke, Institute for International Studies Occasional Paper Issue 1 Volume 1, 2006, available at: www.iis.uts.edu.au.

¹⁴'Party Chief Brings Tibet New Homes', *China Daily*, March 15, 2007, available at: www.chinadaily.com.cn.

¹⁵Tabulation on nationalities of 2000 Population Census of China. Table 1–2 shows 2,427,168 Tibetans in the TAR. Table 1–2c shows that 2,058,011 of them are classified as 'rural'. CECC 2007 Annual Report, Tibet section, available at: www.cecc.gov.

¹⁶*Ibid.*

¹⁷This emerges from a position first established by Mao Zedong, who believed that as society became more advanced under the Chinese Communist Party (CCP), religious belief would eventually wither and die. Mao once said: "It is the peasants who put up idols, and, when the time comes, they will throw the idols out with their own hands. [...] It is wrong for anybody else to do it for them." According to the CCP's Marxist, atheist ideology, religion is a superstitious and unscientific product of natural and social oppression; it has been exploited and used in backward societies as a tool by ruling classes to suppress the people and preserve social inequality. According to this Marxist materialist worldview, religion will disappear in a socialist society. Practical measures to handle religion in Tibet have varied from differing degrees of tolerance to persecution of practitioners. For further details, see Chapter 1, "The Politics of Religion", in the ICT report, 'When the Sky fell to Earth: The new crackdown on Buddhism in Tibet', available at: www.savetibet.org.

¹⁸*Ibid.*

¹⁹Du Ping, director of the Western Development Office under the State Council, went onto stress that "relocations are voluntary [and] carried out in a way that fully respects public opinion and minority cultures." See: '700,000 environmental migrants in China's western regions' [中国西部地区生态移民已达70万人], *Xinhua*, June 21, 2005, available (in Chinese) at: <http://news.xinhuanet.com>. See also: 'Over one million Qinghai farmers and herders participate in "give up farmland for trees" policy over last five years', *Qinghai News*, July 2006, available at: www.tibetinfo.com, which notes that the "provincial government's plan to 'give up farmland for trees' and the development of [the] natural environment through peaceful co-existence between people and environment, has been successfully and successively implemented in Qinghai". Quoted in 'No one has the liberty to refuse: Tibetan herders forcibly relocated in Gansu, Qinghai, Sichuan and the Tibet Autonomous Region' report by Human Rights Watch, June 2007, www.hrw.org.

²⁰'The urban population of the Three Rivers Area increases rapidly', *Xinhua*, November 3, 2006, quoted on p. 7, 'No one has the liberty to refuse: Tibetan herders forcibly relocated in Gansu, Qinghai, Sichuan and the Tibet Autonomous Region', Human Rights Watch, June 2007, available at: www.hrw.org.

²¹'40,000 pastoralists from Qinghai to migrate because of environmental degradation: three rivers area to be turned into a no man's land', *Qinghai News Network*, October 31, 2004, also quoted on p. 7, 'No one has the liberty to refuse: Tibetan herders forcibly relocated in Gansu, Qinghai, Sichuan and the Tibet Autonomous Region', Human Rights Watch, June 2007, available at: www.hrw.org.

²²'No one has the liberty to refuse: Tibetan herders forcibly relocated in Gansu, Qinghai, Sichuan and the Tibet Autonomous Region' report by Human Rights Watch, June 2007, www.hrw.org.

²³Source as endnote 3.

²⁴Testimony presented to the 2006 International Conference on Poverty Reduction and the Important Role for International Cooperation in Sichuan, quoted in 'Tibet: A Human Development and Environment Report', Department of Information and International Relations, Tibetan Government in Exile, December 2007, available at <http://www.tibet.net>.

²⁵According to academic Emily T Yeh, this policy began in 2003.

²⁶'*Tuimu huancao* in the family garden', *Xinhua*, December 13, 2007, available at: www.qh.xinhuanet.com.

- ²⁷See State Council Order No 367 'Regulations on Reverting Farmland to Forest', adopted December 6, 2002, effective from January 2, 2003. According to the State Forestry Administration, responsible for implementing this policy, more than 50% of a target 14 million hectares of land had been 'returned' by the end of 2004, quoted in, 'Resettled Tibetans "can't live on charity forever"', *China Development Brief*, May 1, 2006, available at: www.chinadevelopmentbrief.com.
- ²⁸The same source commented: "It should be noted, that while the Chinese government has banned logging in the watershed leading to Yangtze, Mekong and Yellow rivers (all which end up flowing through China), there is still active logging in those areas which drain into rivers that do NOT flow through China, namely the Brahmaputra which flows into the Bay of Bengal."
- ²⁹Communication with ICT, November 2007.
- ³⁰Improving the livelihoods of herders through promoting an improved pastoral ecosystem in Tibet', Zhao Haoxin and Chen Yuxiang, Sustainable Rural Development in Mountainous Regions with a Focus on Agriculture in the Tibet Autonomous Region, International Conference July 26–30, 2004, Lhasa, P. R. China, in Went, Germany, pp. 83–91, cited in: 'Tibet: A Human Development and Environment Report' Department of Information and International Relations, Tibetan Government in Exile, December 2007, available at: www.tibet.net.
- ³¹Gabriel Lafitte points out that Lithang is an area where 'industrialization of animal husbandry' will soon take on quite a different meaning: "At present Lithang is only 300 km from major Chinese markets in lowland Sichuan where there is a high demand for animal products, especially with the present pig production crisis in China [with the fatal 'blue ear' infection decimating pig production in mid-to late 2007]. As Lithang is on one of the main highways into Tibet, which China is spending enormous sums upgrading, it may soon be possible to do those 300 km to Chinese urban markets in only a few hours, enabling Chinese middlemen to enter Lithang and buy meat on a large scale. This encourages the emptying of the grasslands (*tuimu huancao*) and the replacement of extensive production by intensive penned animals reared by poor Chinese in large sheds close to the highways, feeding lowland (or highland) grain to the animals in feedlots. This transformation of animal production has already happened in Inner Mongolia, especially among dairy herds, and is likeliest in Tibet in areas reachable from major Chinese markets, and that includes Lithang. The report is a typical official report emphasizing the achievement of official targets and the arduous task ahead. All of this will be transformed once the grasslands are quickly accessible by road. Then private entrepreneurs will take over, and the grasslands not fenced out of bounds under *tuimu huancao* will become just rearing areas for young animals which are transferred to pens near towns once they are mid adolescent. Tibetans will do the arduous work of rearing the young weaners, and Chinese will do the value-adding bit in feedlots, cornering the profits."
- ³²Source as endnote 22.
- ³³Articles 41 and 111 of China's Constitution guarantee the right to consultation, as does the 1989 Administrative Procedure Law (see Articles 2 and 9 of the 1989 Administration Procedure Law). This law and the 1986 General Principles of the Civil Law of the PRC also stipulate compensation for property seized illegally. The 1998/1999 Land Administration Law spells out the process by which property can be requisitioned, processes by which compensation should be paid, and amounts. According to Human Rights Watch, "Indications are that [these] are rarely followed". (Source as endnote 22.)
- ³⁴'Survey of Ecological Migration Studies', Meng Linlin, Bao Zhiming, *Journal of the Central University for Nationalities*, p 49.
- ³⁵*Ibid.* A settled nomad called Yang Zhong told *China Development Brief*: "We were promised barley, but received nothing." May 1, 2006.
- ³⁶Human Rights Watch interview with a Tibetan from Gepasumdo County (Chinese: Tongde), Tsolho Tibetan Autonomous Prefecture (Chinese: Hainan TAP), Qinghai Province. Source as endnote 22, pp. 42–43.
- ³⁷Source as endnote 24.

- ³⁸'Hoofs on the Roof: Pastoral livelihoods on the Qinghai-Tibetan plateau: The case of Chengduo county, Yushu prefecture', Michele Nori, Association for International Solidarity in Asia (ASIA), 2004, p. 50, available at: www.case.edu.
- ³⁹'On the road: Second letter from Golmud: Herdswomen meet factory life', Raymond Zhou, *China Daily*, July 18, 2007, available at: www.chinadaily.com.cn.
- ⁴⁰The reporting rarely reflects the complex reality or the scale of the resettlement. A BBC Online news report, 'China's relocation of rural Tibetans', showed a 'before' image of a dilapidated shack and an 'after' picture of a clean, bright looking house with happy looking family, where the residents were settled nomads. The reporter, Michael Bristow, observed: "If the choice is between the two houses being shown to journalists, it is not hard to believe officials when they say they have not had to force anyone to move." See: 'China's relocation of rural Tibetans', BBC Online, August 13, 2007, available at: www.bbc.co.uk.
- ⁴¹ See Tim Johnson's 'China Rises' blog, May 2007 archive, available at: <http://washingtonbureau.typepad.com>.
- ⁴²'Traditional nomadic pastoralism and ecological conservation in Tibet's Northern Plateau', Melvin C. Goldstein et al, The Center for Research on Tibet, 1990, available at: www.case.edu.
- ⁴³Source as endnote 24. The same report quotes the Dalai Lama saying that: "the life of a nomad is lonely, but very peaceful", and "can be called a model of harmony with the environment".
- ⁴⁴The expert asked to remain anonymous.
- ⁴⁵In one large-scale incident, involving Tibetans in different counties rather than between households, at least 29 Tibetans died between 1997 and 1999 in violent disputes between nomads from Machu County (Chinese: Maqu) in Gansu Province, and nomads from Sogpo Mongolian Autonomous County (Chinese: Henan MAP) in Qinghai Province, cited in 'Tibetan range wars: Spatial politics and authority on the grasslands of Amdo', Emily T. Yeh, *Development and Change* 34 (3), Institute of Social Studies, Blackwell Publishing, Oxford, UK and USA, 2003, available at: www.case.edu.
- ⁴⁶'Segmentation within the state: the reconfiguration of Tibetan tribes in China's reform period', by Fernanda Pirie, *Nomadic Peoples*, Vol 9, No 1 & 2, available at: www.berghahnbooks.com.
- ⁴⁷'Analysis of current ethnic relations in Qinghai's Tibetan Autonomous Areas', Lijia Caidan, Yang Hude, *Nationalities Research in Qinghai*, Vol 17, No 3, July 2006, p 50, cited in 'No one has the liberty to refuse: Tibetan herders forcibly relocated in Gansu, Qinghai, Sichuan and the Tibet Autonomous Region', Human Rights Watch, June 2007, available at: www.hrw.org. The HRW report gives various examples of local unrest, such as the cutting of wire fences in one area, and the burning of a slaughterhouse in another.
- ⁴⁸Source as endnote 8.
- ⁴⁹'Beyond Great Walls: Environment, Identity and Development on the Chinese Grasslands of Inner Mongolia', D. Williams, Stanford University Press, Stanford, 2002, p. 10, cited in 'Searching for grass and water: Ecosystem sustainability and herders' livelihoods in western China', Daniel J. Miller, 2007, forthcoming paper kindly supplied by the author.
- ⁵⁰Source as endnote 7.
- ⁵¹'Man's Impacts on Biodiversity in Tibetan Nomadic Societies of Western Sichuan', Wu Ning, one of a collection of papers on issues affecting Tibetan nomads published on the website of The Centre for Research on Tibet, available at: www.case.edu.
- ⁵²'Building communities and saving the environment', Yongfeng Feng, September 11, 2007, available at: www.chinadialogue.net.
- ⁵³ *Ibid*.
- ⁵⁴ *Ibid*.

⁵⁵Participants in the parallel conference will include groups of Chinese scholars and developmentalists who aim to bring more cultural and people-centered perspectives into grasslands conservation, such as the People and Grasslands Network, coordinated by Hao Bing. In the same article in *China Development Brief*, Hao Bing made it clear that she was not advocating a complete return to nomadic lifestyle, saying that this “is not practical”. But she said that new technologies such as solar energy and the internet might give herders a chance to re-shape their traditions.

⁵⁶Source as endnote 51.

⁵⁷Article published in *Wildlife Conservation* magazine, published by the Wildlife Conservation Society, August 2007, available in printed edition only.

⁵⁸Source as endnote 52. Cuochi village is at the center of the Three River Source Nature Reserve, which covers an area of 2124.5 square km on the Qinghai-Tibet plateau, at an average elevation of 4200 meters above sea level.

⁵⁹*Ibid.*

⁶⁰*Ibid.*

⁶¹Source as endnote 8. For the latter quote, Miller is citing D. Sheehy in ‘How to deal with the environmental degradation of Northern Chinese grassland’, pp 67–82, 1998, in ‘Grassland Management and Livestock Production in China’, Jian Liu and Qi Lu (eds.), Reports of the Sustainable Agriculture Working Group, China Council for International Cooperation on Environment and Development. China Environment Science Press, Beijing.

⁶²*Ibid.*, pp. 53–54.

⁶³Miller, *ibid.*, citing Goldstein, M., and C. Beall, 1990, ‘*Nomads of Western Tibet: Survival of a Way of Life*’, Odyssey, Hong Kong.



Constructed in the winter of 2004, the Darlag nomad settlement camp in Golok Tibetan Autonomous Prefecture (Chinese: Guoluo TAP) in Qinghai Province now houses hundreds of Tibetan families who once sustained themselves from the land as nomadic pastoralists. Their livelihoods are now more precarious. IMAGE: ICT.

PORTRAIT OF URBANIZATION

'The town trails up to the monastery gates like a long stretch of debris'

THE CHINESE AUTHORITIES aim to create a 'capital' for the grasslands area with the county town of Dzoerge County (Chinese: Ruo'ergai), in Ngawa Tibetan & Qiang Autonomous Prefecture (Chinese: Aba T&QAP) in Sichuan Province — an area that is part of the Tibetan region of Amdo. This account by researchers Steven D. Marshall and Dr. Susette Cooke, who visited the town in the late 1990s, gives a bleak picture of development in the region.

Dzoerge Dzong – Brief description and impressions

The Amdo grasslands county of Dzoerge lies in the northernmost stretch of Ngawa T&QAP. With an area of 10,203 square km it is almost the largest county in the prefecture, only slightly smaller than Ngawa. Lower than the rest of the Amdo grasslands, it consists almost entirely of a basin of pasture land at an elevation ranging between 2500 and 3500 meters, surrounded and intermittently patched with higher ground. Along the Black River watershed, much of the land is marshy and rich in peat. A curve of the Yellow River forms Dzoerge's western border with Machu County in Kanlho [Chinese: Gannan TAP, over the northern boundary into Gansu Province], and on its southern edge it touches Ngawa, Kakhog, Zungchu and Namphel Counties in Ngawa T&QAP. To the north, the Chinese-drawn prefectural boundary truncates it from the region of lower Kanlho with which it shares long historical and cultural affinities.

Dzoerge county town is distressingly similar to Kakhog in appearance, an even greater blight on the landscape. Creating a 'capital' for the grasslands seems to have been the aim in building the town, but a task that has proved difficult. After the political administration reshuffles of the early 1950s, a site had to be chosen for the newly created county's seat, which would satisfy control, transport and administrative requirements. The Chinese therefore chose the influential Tagtsa Monastery, lying close to the central Ngawa region and Southern Gansu Province, at an elevation of 3,470 meters. They commemorated the monastery's existence when choosing an official designation for the town, Dzasizhen [a Chinese rendition of 'Tagtsa Town']; they then proceeded to create a particularly unattractive Chinese settlement.

Nomad settlement as slum area

The town trails up to the monastery gates like a long stretch of debris. In the past a Tibetan village must have been attached to the *gonpa* [temple], but now no trace of it remains. Depressing nomad settlements — little more than rough slums — blemish the town outskirts, while old, semi-abandoned, run-down compounds compose the town inside. Everything in the town seems dilapidated. Commercial activity is mostly confined to the main street towards its south end, where crude wooden single-story rows of shops and restaurants, mostly run by Hui, line the street. Older government compounds lie at the north end of town before the *gonpa* is reached; newer government buildings have been erected at the south end. A milk powder factory appears to be the only major industrial unit in town, although others are said to be operating.

A slogan on the wall of the Nationalities Trade Company premises exhorts the townspeople to 'love Dzoerge and love the Motherland', a puzzling directive if the town represents the Motherland's attitude towards Dzoerge. On the positive side, electricity is available, with some irregularities and blackouts, 24 hours a day, compared to only five in Kakhog. Along the north flank of the town, the hillside has been partly reforested and converted into a park, complete with Chinese pavilions placed to give a view of the town below. Still the only really appealing features are the numerous colorful nomads visiting the town and their home, the surrounding grasslands. While the usual colonial infrastructure and bureaucracy fill the compound, the streets are dominated by nomads. Daylight hours find scores of them roaming the town for shopping, curiosity or idleness. In that sense, Dzoerge grassland nomads have made it their 'capital'. But like Kakhog, the artificial grasslands town further south, Dzoerge stands for the forcing of a Chinese-style civilization on the local Tibetans, which is not working very successfully for anyone. The Chinese government's decision to open either of the lamentable examples of their colonial policy to foreign tourist is perplexing. The official reason given is that they lie on the direct transportation route around the prefecture from Chengdu, unlike Ngawa (closed) and Dzamthang (closed), which involve diversions. More significantly may be their lesser reputation for political unrest.

Pastoralism

Dzoerge is an overwhelmingly pastoral county, where until Communist times Tibetans engaged in a nomadic lifestyle, grazing yaks and sheep, occasionally pigs, and raising a famous breed of horse. The forced settlement of nomads has been a strongly-pursued policy in Ngawa T&QAP, however, and many of Dzoerge's nomads now live in fixed

settlements in the county town area and throughout the countryside. Although possibilities for minimal education, medical care and commercial facilities occasionally exist in the larger of these settlements, they are generally wretched-looking places, consisting of shabby barracks like living quarters surrounded by animals' pens. Tibetans in them maintain what they can of traditional values and customs, almost all retaining traditional dress and decorating their dismal Chinese-style homes with prayer flags. The wear on grazing land that results from the concentration of so many animals in a limited space is easily visible and will create long-term problems with land degradation and subsequent economic losses for the pastoralists. A few tents seen along the highway indicate that at least some nomads have managed to remain 'independent'. Several state ranches have been established in the county, including Baozuo Ranch, Xiangdong Ranch, Axi Ranch, Wanmu Pasture, Heihe Ranch and the Xiaman Sheep Breeding Ranch.

Nomad settlements appended to the county town are particularly squalid. Some nomads have been settled here under government directive, while others have moved to seek employment or business opportunities in town, some animals with them to be grazed on outside pastures by day and penned at night in the enclosures surrounding the residential shacks. Nothing Tibetan characterizes these crude structures, other than the people living in them. By the formation of neighborhoods like this, essentially unsuitable for a sustained pastoral economy because the now limited grazing land nearby will not support it, the Tibetans involved will gradually become urbanized, linked more to the Chinese town than their former traditional lifestyle.”



The Kunlun mountain range towers over the eastern section of the Golmud nomad settlement camp a few miles north of Nanshankou, the first station of the railroad to Lhasa.
IMAGE: ICT.

ABOARD THE STEEL DRAGON

Environmental impacts along the route of the railroad

EVEN THOUGH THE NEW TRAIN to Lhasa makes few stops (see: route map, p. 56), the observant traveler can identify along the way some of the environmental impacts of Chinese policies in Tibet. This section of 'Tracking the Steel Dragon' describes what meets the eye on such a journey to Tibet starting from the industrial city of Xining, the capital of Qinghai Province. The first half of the journey, up to Golmud (Chinese: Ge'ermu) is on a railroad built a generation ago and passes through a now heavily industrialized and militarized landscape. By observing the oil wells, salt pans, and missile bases en route, the traveler can grasp the rapid changes taking place in remote central Tibet on the second half of the journey. From Golmud through to Lhasa, on the track completed only in 2006, the environmental impacts so obvious in the first half of the journey are just beginning to appear, concentrated along the rail line.

Lanzhou and Xining

For centuries China's westernmost outpost, Lanzhou, capital of Gansu Province, is where railway engineers and scientists designed and tested ways of building a railway that, unlike all the highways, would not buckle and crack, heave and slump every year, endangering drivers and loads. Despite decades of highway building and rebuilding, every warm season the highway surface would slump into dangerous potholes, as water in the soil melted away. Every winter, sub-surface water would freeze and heave the road surface upwards, in dangerous bumps and bulges.

It took decades of observation of the coming and going of ice and water in the earth to figure out how to construct a stable bed for rail traffic. That research was all conducted from and analyzed in Lanzhou. The First Survey and Design Institute of the Ministry of Railways came up with the master plan, assisted by scientists at the Chinese Academy of Sciences' State Key Laboratory of Frozen Soil Engineering, a unit within the Cold and Arid Regions Environmental and Engineering Research Institute.

Travelers who stop over in Lanzhou can visit these pioneers at 326 West Donggang Road in Lanzhou, just down the street from the older Lanzhou Institute of Glaciology and Geocryology at number 174, which began the investigation into how to build roads and railroads across Tibetan permafrost.¹

Trains destined for Lhasa converge on Lanzhou from several directions: from Beijing far to the east, from Shanghai and Guangzhou in the southeast, and from Chongqing and Chengdu to the south.

Xining (Tibetan: Siling) is by far the biggest city on the Tibetan plateau,² with almost one million people, at least three times the population of Lhasa. For a city that in 1949 had only 60,000 people, urban growth has been spectacular. There is almost nothing old to be seen, other than the wooden mansion of the last pre-revolutionary warlord to rule Xining, Ma Bufang.³ Perhaps for this reason tourists seldom stop in Xining. Tibetan travelers seldom stop in Xining either, since (apart from students and tradesmen) it is almost entirely Chinese with only two percent of its population Tibetan, according to the most recent census.

For those with business to transact, Xining, in its far corner of Qinghai closest to the Chinese interior, has plenty of industries, most of which depend on Tibetan resources. Xining factories process the salts from the dry salt lakes of northern Tibet, extracting magnesium and potassium for fertilizers, and lithium and even strontium for a wide range of industrial uses. In and around Xining are many factories, mostly state-owned, adding value to the salts, oil and minerals of Tibet by processing them into chemicals in demand in China's vast industrial complex. Xining is a chemical city, also a city of smelters, producing wastes which often pour with little or no treatment, legally or illegally, into a tributary of the Yellow River. The city, which lies between hilly ranges, frequently experiences bad air pollution.

Xining faces west, into the interior of Qinghai, to obtain its raw materials, but mostly it faces east, towards the Chinese heartlands, and particularly towards Lanzhou, capital of the next province, Gansu. Lanzhou has dirtier air, far more refineries, a longer history as a Chinese city, a bigger population and a wider range of industries, many of them producing military material. What today is the separate province of Qinghai was part of Gansu Province, ruled from Lanzhou, until a century ago. Xining is Lanzhou's satellite, and the 200 km corridor connecting the two cities is a zone of intensive communications and production, with high-density farming, expressways, railways, pipelines and optical fiber cabling. Increasingly, Chinese leaders speak of Lanzhou-Xining as a single mega-urban metropolitan cluster that includes intensive crop-growing and animal production serving urban markets.

The refineries of Lanzhou are the destination for all the rail tanker wagons passing in the opposite direction out of Tibet and into a massive refinery complex, whose capacity is now being doubled. From processing five million tons a year, it will soon

process each year 10 million tons of crude oil from Tibet and the Xinjiang Uyghur Autonomous Region (XUAR).⁴

Extracting the oil is cheap and profitable, as the traveler will see when the train pulls in to Golmud, but at present there is little profit in refining, since central leaders insist that the prices charged by the huge state-owned refineries be kept below world prices in order to avoid discontent among heavy oil users such as farmers or taxi drivers and thus fulfill the political imperative of maintaining 'stability'.

Both Xining and Lanzhou are part of China's yellow earth (loess) region, of deep but easily eroded soils formed by the wearing away of the Tibetan plateau above. When the train departs Xining, the public address system on the train begins to advise passengers about the precautions against altitude sickness available on board, but Xining is well below 3000 meters (9843 feet), and not until the train passes Golmud does it climb to altitudes requiring adjustment to thinner air.

Heading west towards the great lake

The first part of the journey out from Xining is through farmland intensively settled and cultivated by poor immigrants to Tibet, on small farms across the yellow earth made famous by Chinese movie directors of the 1980s.⁵

The yellow earth is a fine silt, sometimes hundreds of meters deep, created by sediment from the erosion of the Tibetan plateau. The yellow earth is fertile if not over-used, but it does not hold water well, and is often over-irrigated at the cost of deep gullies and serious erosion. In an overcrowded area, this worsens poverty, which leads farmers, in desperation, to chop down the few remaining trees, plough and plant everywhere possible, exposing the soil to further erosion by rain, wind and snowstorm. So extreme is the over-population and poverty of this far northeastern corner of the Tibetan plateau that in the 1990s the World Bank accepted China's proposition that the situation was beyond remedy, and the only solution was to ease population pressure, by transferring tens of thousands of the poor elsewhere, deeper into the Tibetan plateau.⁶

China's revolutionaries encountered the ravaged yellow earth in the 1950s. Yuan Tsung-Chen, at the time a young and enthusiastic supporter of China's development plans in Qinghai, wrote: "At first, we had marveled at the strangeness of the landscape. It was a plain riven by deep gullies so that the dirt road either meandered wildly to avoid the slits in the earth or plunged zigzag down and up the sides of the ravines that couldn't

be avoided. The earth had been ravaged and made desolate. I knew from my history books that these eroded lands were once pastures and forested plateaus. Then the pastures had been ploughed up to grow crops and the forests had been cleared for farmland. The natural rhythm of nature had been disturbed. Without vegetation to hinder them, the rains and run-off rivulets of centuries had eaten into the fields and carried them away.”⁷

World Bank reports of the 1990s describe a similar disaster combining overpopulation, excessive exploitation and acute poverty: “The principal environmental issues in the move-out area [where 60,000 Han Chinese farmers were due to be relocated to Tibetan areas under the China Western Poverty Reduction Project in 1999] are the impacts of the extreme soil gradients and harsh climatic conditions under which farming is practiced in the high mountain areas.⁸ [...]The target population live in fragile agricultural and pastoral lands. In Qinghai, crop yields are low due to poor soil quality, low rainfall, recurrent drought and undeveloped farming techniques. Increasing cultivation and grazing pressures in mountainous areas are having devastating ecological impacts and there appear to be limited and possibly even no environmentally sustainable development options available in those areas... Soil erosion ranges from bad to very severe. There is virtually no natural vegetation left.”⁹

The rail passenger, insulated from the realities of poverty beyond the train’s windows, may not notice the consequences of an unchecked influx of migrant workers.

PERSPECTIVES:

‘THE DESERT IS SLOWLY EXPANDING INTO OUR FARMLAND’

A young Tibetan woman, Lhamotso, describes Tibetans’ struggle to survive in Hainan Tibetan Autonomous Prefecture (Tibetan: Tsolho TAP) in Qinghai Province — in northern Amdo.

“My hometown is located in a remote area surrounded, not by beautiful grasslands and limpid rivers, but a vast expanse of sand dunes as far as the eye can see. We are a pastoral community, and for over 100 years, the people of my village have made their living by farming the arid land. Traditionally, local people grew wheat, potatoes, beans and rapeseed, and enjoyed bountiful harvests. But for the past decade, most of the families in my village have not even been able to produce enough food to feed their own families. The desert is slowly expanding into our farmland, making our former way of life impossible. Due to government restructuring, the

amount of land that each person owns is not sufficient to produce any substantial harvest. To make matters worse, most of the small fields that villagers own are littered with sand and stones, making them useless for farming. Fields that otherwise would be productive are often desiccated because of the unreliability of our village's irrigation system.

The barrenness of our village's fields has driven the people to find other means of income. The people in my family, like many in my village, make money doing unskilled migrant construction work such as mixing mud for houses and building roads. They also dig for caterpillar fungus, a medicinal herb which is used to make medicine. [See 'Winter worm, summer grass' — the risks of dependency on yartsa gunbu trade and increasing competition from Chinese traders', p. 177.] Except for these two options, there are no other known ways to earn money to survive. The problem with both of these sources of income is that they are unstable and unreliable. As the daughter of peasants, I know what a struggle it is for an entire family to survive on the meager earnings brought in from the fields. I can see this struggle in the heavy wrinkles on my young parents' foreheads and their stooped gait as they come home for the night."¹⁰

Qinghai Lake

The train to Lhasa plunges into the night along the northern shores of China's largest lake a shrinking inland sea known to Tibetans as Tso Ngonpo, to Mongols as Koko Nor and to Chinese as Qinghai Hu, all of which mean 'blue lake'. It is a habitat for rare animals and plants.

Geographers and environmentalists have warned that the pressure on this area of tourists arriving by rail may make the lake disappear in less than a decade.

Shen Ji, a researcher at the Institute of Geography of the Chinese Academy of Sciences in Nanjing on China's east coast, said in 2003: "Once the lake is destroyed, it will be impossible to recover the ecological protection provided by this perfect microclimate." Qinghai Lake covers around 4285 square km and is a refuge for many endangered animals, such as Przewalski's gazelles, which number fewer than giant pandas, and the extremely rare black-necked cranes.¹¹ Plants at risk of extinction because of widespread pollution are found here. But since the 1950s, the water level of the lake has dropped nearly four meters, and the area within its banks has shrunk by 670 square km.¹²

As a result of the passage of the railroad near the lake, authorities anticipate an annual 30% increase in tourist visits. But local officials and environmentalists have warned of adverse consequences. Speaking at a conference in Nanjing, Shen Ji said: "The upsurge in visitors would bring more rubbish. The lake cannot take any more, and the construction of hotels and restaurants nearby would add to the contamination."¹³

Because the lakes of Qinghai are shrinking, former shore lines are now desert, especially where these lakes, which have no outlet, have over the centuries concentrated salt and are now brackish. As a result, the first desertified areas the rail traveler will encounter lie along the northeastern edges of the lake, where the land is too saline to sustain farming or even grazing.

The train is now beyond the traditional farming zone as the altitude steadily climbs. After leaving the lake, the train, running parallel with the highway and the buried optical fiber cables, cuts south, through the first mountain passes. This part of the line was built in order to access the arid Tsaidam Basin's mineral and energy wealth, and was essential for shipping the output of those new fields back to China. The rail line is seldom elevated above the surrounding terrain, although in places it is cut into the rock faces overhead.

Qinghai's nuclear graveyard as a tourist attraction

It was Qinghai Lake, China's largest saltwater lake, that was chosen in the 1950s as China's nuclear weapons development and testing area, especially for the submarine-launched missiles China sought in its urgent program seeking parity with the superpowers.¹⁴

China shut the center after conducting its last nuclear test in 1998, and much of the equipment has been removed. But the once secret military establishment now plays a part in the patriotic story of China's rise, and is promoted as a tourist attraction.¹⁵ A Xinhua report in 1999 referred to the creation of a 'tourist scenic spot' at Xihaizhen in Haibei Tibetan Autonomous Prefecture (Tibetan: Tsochang TAP), the seat of the prefectural government and also a retired nuclear weapons development and production base. "Since 1996, Xihaizhen has received nearly 200,000 visitors from home and abroad," the Xinhua report stated. "It is reported that an exhibition hall will be built to feature the construction and development of the town, as well as models of atomic and hydrogen bombs and biographies of some experts in the field."¹⁶

The air-conditioned train to Lhasa makes no stop to see the ruins of China's nuclear weapons base. It presses on into drier country, where rivers run intermittently with no outlet to the sea or to any major river system. From here on, throughout the journey, the traveler is in areas of internal drainage, where whatever is washed into one of the many shrinking lakes will stay there forever. There is no natural process for flushing away toxins.

Tsaidam Basin: Treasure-store of the west

The rail line heads west along the northern rim of the arid Tsaidam Basin, known as China's 'treasure house' of the west due to the huge abundance of natural gas and oil, as well as the PRC's largest reserves of lithium, magnesium, potassium and sodium.

Asbestos has been mined at Mangya, far to the west and close to the XUAR border, for many years and is processed much closer to this section of the rail line, in Chilen County (Chinese: Qilian). The processing plant leaves highly carcinogenic asbestos piles uncovered in its central courtyard, according to the Tibet Information Network.¹⁷ This state-owned asbestos mining company, on the latest available statistics, employs around 3000 people, a sizeable work force to be exposed to the deadly fibers.¹⁸

The Tsaidam Basin has long been a base for lead and zinc mining — on a modest scale by world standards in terms of tons extracted — but like the asbestos facility, these lead and zinc mines, in the absence of sufficient capital invested in modern, safer methods, are operated in labor-intensive ways.

However, the resource which most attracted China to the Tsaidam Basin and prompted the construction of the rail line as far as Golmud, its desert terminus for decades, was oil. China has annually extracted around two million tons of oil from Tibet over the decades,¹⁹ sent on rail tanker wagons to Lanzhou, capital of Gansu Province, for refining, or processed first at the Golmud refineries and petrochemical plants, where it is made into fuels, urea fertilizer, plastics and other petrochemicals, in the biggest industrial complex in Tibet.

Golmud was the end of the line from the mid 1980s until 2006, when the line to Lhasa was completed after five years of construction and 35 years of planning and research. Golmud had been little more than an overnight camp for trade caravans, their yaks or camels laden with trade goods in demand far away. But the rush to populate the whole of Qinghai Province, and especially those areas suited to industrialization, quickly



Major mineral deposits in Tibetan areas of the People’s Republic of China. Note, gold deposits are too numerous and widespread in Tibet to show on this map. Gold and silver deposits are generally found among copper deposits in Tibet. This map does not present a comprehensive overview of all deposits, but singles out some major sites.

stripped the remaining vegetation, denuding altogether the already parched pasture and its occasionally lush summer meadows.

As the train makes its way to Golmud, it passes many salt lakes. Salt is a major raw feedstock in the manufacture of plastics and other chemicals, and the potash salts can be used to make fertilizer. Ever since China abandoned the old practice of recycling human wastes onto the fields as ‘uncivilized’, the need for chemical fertilizers grew. China’s factories readily made urea fertilizer from oil, but the potassium needed for a balanced fertilizer was in short supply for a long time. Only in recent years has China fulfilled the announcements made over several successive Five-Year Plans — regional and national development blueprints — to build a potash fertilizer plant based on Tsaidam Basin salt. In fact, on latest available statistics, China now bulldozes and extracts 17 million tons a year of potash from the Tsaidam Basin, more than half the total mineral extraction of the entire Qinghai Province.²⁰

In addition to asbestos, lead, zinc, oil and salt from the Tsaidam basin, China in the 1990s confirmed the presence of natural gas under this sedimentary basin, and brought in the Italian company Eni/Agip²¹ to extract it, piping it to Lanzhou and on to major Chinese coastal cities far to the east. The most recent production figures indicate gas extraction is currently close to 2000 million cubic meters a year.

Exploitation of the Basin has required laying several pipelines: the gas pipeline of the late 1990s from the Tsaidam Basin to Lanzhou and the fuel pipeline (now too small for the present Lhasa population's fuel needs) from the Golmud refinery south to Lhasa, following the same route as the highway and now the railway. The corridor south has been excavated many times, for optical fiber cable laying, pipelines, rail and endlessly re-dug as highways failed to withstand the Tibetan climate. The laying and maintenance of these underground pipelines exacerbates erosion of the grasslands.

Golmud: The beginning of the line

For international travelers, Golmud has always been a necessary stopover en route to Lhasa, where the train from China terminated, and the jolting bus ride began. Now it is the first major stop on the railroad since Xining.

An industrial city in a windswept, barren landscape, Golmud was everything Lhasa was not. It has become a bleary sight through the windows of the train: chemical smells, gas flares, giant tanks and endless piping. Not only has the heavy truck and bus traffic largely vanished, even the logistics center of the transport corridor into and out of Tibet is shifting down the line to Nagchu (Chinese: Naqu) in the Tibet Autonomous Region (TAR).²²

Lhasa and Golmud are directly connected by an underground oil pipeline directly supplying central Tibet with fuel for all aspects of modernity. Their populations are about the same size, 200,000 to 300,000; and both populations are composed mainly of Chinese immigrants.

Up into the permafrost

All four trains to Lhasa — originating in Beijing, Chongqing, Shanghai or Lanzhou — traverse the most industrialized part of Tibet into Golmud, at night, then, after Golmud, begin the ascent to the roof of the world, to the highest, coldest and driest parts of the

entire Tibetan plateau.

In this frigid area, gale force winds blow, sometimes hard enough to derail trains. Chinese scientific maps show that on the high plateau route, gale force winds (Force 8 or above, meaning winds up to 75 km per hour – 47 miles per hour — with gusts up to 92 km per hour – 57 miles ph) blow between 100 and 150 days a year. This is a climate of extremes, regarded even by Tibetan nomads as the toughest environment anywhere on the plateau.

In March 2007 gale force winds — well above Force 8 — toppled a train in Xinjiang, north of Tibet.²³ In April 2006 the windows of another train traveling from Urumchi in the XUAR to Beijing were cracked by a sand storm and the train was delayed 32 hours near the site of the accident in March 2007. Eleven train cars were derailed by strong winds in April 2001 in the same section. No one was killed in that accident. “Trains are easier to overturn than cars because they are higher and narrower,” said Wang Fengyu, a physics professor from Beijing Jiaotong University. “In a sandstorm the wind blows out the windows on one side of the train. Then the winds swirl into the carriages and capsize them,” said another professor surnamed Wu.”²⁴

Immediate impacts on environment of the transport corridor across Tibet: The ‘Qinghai-Tibet Engineering Corridor’

The route up onto the high plateau, across the mountains, then finally down to Lhasa has been blasted, dug, bulldozed, dug up again, probed, tunneled, cut, shifted and crushed so many times, Chinese scientists now simply call it the Qinghai-Tibet Engineering Corridor (QTEC).

Along this corridor runs the main highway connecting central Tibet with China, an oil and fuel pipeline that quickly became too small, a high voltage electricity transmission line, buried optical-fiber cable trunk line and of course the railway to Lhasa. The pipeline carries 120,000 tons of oil and fuels to Lhasa each year.²⁵ Each of these interventions required extensive earthworks, each time disturbing the fragile balance of temperature, soil, water retention and biomass. Each new technology cut afresh into the living turf, further exposing the active layer of the subsoil to erosion.

Some of the man-made intrusions repeated the disturbance many times, especially the highway, which has been extensively rebuilt many times, because of its repeated failures and collapses due to the unpredictable workings of permafrost. In 2007, the

highway was due to be dug up all over again for another major overhaul, turning it into an expressway, part of China's national interstate highway network. Chinese statistics record a dramatic decline in the mileage of Tibetan highways classified as all-weather. In the 1980s and up to the mid 1990s, China optimistically classified over 90% of all TAR highways as all-weather, but by 2005, this was down to only a quarter.²⁶

The QTEC has a long history as a trade route, and, a century or more ago even as a pilgrimage route offering the shortest but most arduous connection between Mongolia and Tibet. The deep devotion of the Mongols to Tibetan Buddhism brought plenty of pilgrims this way, but they had to be well prepared, in big caravans with many yaks, because the route is so high and cold and is so sparsely populated that few provisions could be obtained along the way. Several European adventurers of the past wrote accounts of their passage through the mountains here.²⁷

The long history of this difficult but regularly used trade and pilgrimage caravan route has been rewritten, as contemporary China has inscribed a new story of Chinese heroic pioneers building a corridor to engineer the advance of modernity through 'no-man's land' (as it is often called in Chinese), as if human livelihoods in upper Tibet were unknown and even impossible.

Current policy remains deeply conflicted. On one hand the semi-settled nomads brought in are now routinely blamed for overgrazing, rangeland degradation, landslides and endangering wildlife; on the other hand Tibetans in these remote areas are heralded as the main beneficiaries of the new railroad opening up market opportunities for their future prosperity. Official propaganda implies that the entire purpose was to enable nomads to create wealth. Official statements on a railroad built, officially, "for consolidating the southwestern border of the motherland and exploiting rich natural resources along the railway"²⁸ now emphasize the benefit to Tibetans of getting their meat or even mineral water to distant Chinese markets.

Although the landscape through which the train passes is prone to frequent earthquakes, even a minor disturbance to the soil, even on gentle slopes, can be enough to cause a landslide when the soil held together by underground ice. A 2006 report by Chinese and Japanese scientists analyzing landslides along the rail line suggests that nomads digging the turf at the toe of a gentle slope, to construct a rough sheep pen for sheltering their herd from gales, triggered a landslide that continued for 10 years.²⁹ This is at one of the three high passes the rail line negotiates, the Tanggula mountain pass on the border between the TAR and Qinghai Province, the last high point before the gradual descent to Lhasa.

Elsewhere along the line, scientists say, landslides are usually caused by QTEC interventions. China, in its constant publicity, is adamant that the railroad is 'green' and entirely benign in its environmental impacts, but China's scientists, in learned journals, give a different picture. "Along the Qinghai-Tibet highway, compact thaw slumps are common in mountainous or hilly terrain. A detailed study has been carried out on such a landslide at milestone K3035 of the Qinghai-Tibet highway. The thaw slumping area [...] is arc-shaped. By 2003, the size of the slide was 75 m wide and 103 m long, and the total volume of the failure mass was about 10,000 cubic meters. The original sliding was caused by excavation of the slope toe in 1990 during the repairing of the Qinghai-Tibet highway. After that, the excavation began to collapse in warm seasons and leave the ground ice exposed to the air.

"As the collapsed soil masses accumulated on the gentle slope surface of the ground ice, the melted water concentrated on the surface resulting in additional losses in strength. The whole sliding process was a continuous repetition of the original sliding. According to our recent survey and monitoring, the thaw slump [...] has been active for more than 10 years. That means that, similar to retrogressive flow, thaw slumping will not stop until the ice-rich permafrost disappears. The results indicated that the collapsed soils on the ground-ice surface moved much more quickly than the undisturbed natural ground did. Thaw slumps have damaged local engineering structures. For example, the slump [...] on the highway has blocked a culvert several times. Also, it raises geo-hazard problems to the Qinghai-Tibet railway because the railway crosses many ice-rich permafrost slopes where thaw slump hazards should be carefully evaluated."³⁰

Permafrost on the shifting plateau, climate change and the railway: Present and future impacts

The landscape traversed by the QTEC has been subject to almost half a century of intensive scientific research to unlock the secrets of permafrost. The highway heaved upwards in winter and slumped downwards in summer. It seemed that nothing could be done to create a smooth, civilized, reliable, all-weather road that would last even a single year without constant need for repair.

Permafrost was the problem. Specifically, the problem of Tibetan permafrost is that it is anything but permanent. The alternate freezing and thawing of the earth at the surface or just below it comes and goes seasonally, sometimes even daily because of the wide temperature swings between day and night.

Soviet experts were of little help because Siberian permafrost is deep and permanent. But Tibetan permafrost occurs as far south as 32 degrees — no further from the equator than Shanghai, Lahore, Alexandria or Dallas. Ice grips the soil then melts away, filtering down beyond the reach of growing plant roots. Then it snows, or glacial melt percolates unseen through the water table, saturating a broad valley again, until the earth once more is frozen by the chill winds.

China had very little experience of permafrost, still less of building modern economic development corridors through it. The full resources of Chinese science, from a base in Lanzhou, were marshaled to capture the workings of temperature in Tibetan earth.

Only in the late 1990s was it clear that enough measurements had been done, all along the length of the QTEC, to enumerate the causes and consequences of freezing and thawing, heaving and slumping of the surface. Gradually the numbers came in. The harder China tried to build a modern road, the worse the problem got. Sealing the roadbed with tar made it worse. The only solution was to begin again, with a different transport corridor technology: the railroad, on a different bed, raised, along its entire length, well above the surface of Tibet, to keep the ground exposed as much as possible to the cold air so that it would remain frozen.

Raising the railroad required embankments of locally quarried rock. Over many of the most fragile permafrost areas, steel bridges were raised to allow maximum exposure to cold air. Those embankments and bridges ensure a panoramic view for the traveler today, but that's not why China went to the expense of all those bridges, or undertook the massive earth moving and rock crushing required to raise all those stone embankments.

Politics took over, and the scientists, back in their Lanzhou headquarters, fear that there may yet be a lot more to understand about Tibet than was captured in a few decades of database building. But their ongoing concerns are now brushed aside by the nationalistic triumph of the railroad. When a reporter from *Wired Magazine* in 2006 met up with the scientists who mapped the workings of permafrost in the Engineering Corridor, they were worried.

Journalist David Wolman wrote: “[Lanzhou] is [...] home to China's top permafrost research facility, the Cold and Arid Regions Environmental and Engineering Research Institute. This is where Wu Ziwang and his colleagues used their knowledge of permafrost physics to figure out how to build on the shifting, fragile ground of the vast Tibetan plateau, which is about the size of Alaska and Texas combined. Without

Wu's team, the Qinghai-Tibet railway would never have been completed. Wu, 70, sets down his plastic cup of leafy tea and shuffles through stacks of papers. Taped to the wall of his office is a three-foot-long elevation profile of the newly constructed railway, with the areas of permafrost most susceptible to thawing highlighted in red. If the permafrost under the train thaws too much, the tracks will slump or tilt, and bridges or other structures could crack. Trains would be forced to slow down or, in extreme cases, could derail.

"But now he's torn between dueling loyalties to state and science. On one hand, Wu the headstrong patriot is proud of the work Chinese researchers and engineers have done to make the Qinghai-Tibet line possible. Wu the scientist says he worries that the precarious condition of the permafrost beneath the railway is being overshadowed by the government's post-construction celebrations. He points to a stack of copies of letters he has sent to the Ministry of Railways over the past few years. The general theme: a sometimes pleading, sometimes stern call for better permafrost monitoring and maintenance along the Qinghai-Tibet railway. 'Every day I think about whether the railway will have problems in the next 10 to 20 years,' he says. The government has thus far only ignored or chafed at his warnings. 'When I express concerns to the media,' Wu says, 'the ministry and construction companies call to say, 'Why did you say this? Everything is OK with the railway, so why did you say otherwise?'"³¹

But he has good reason to worry. The ground under this railway is what could be called barely permanent permafrost. Unlike the terrain in Alaska and Siberia, where frigid temperatures typically keep permafrost well below the thawing point, the subsoil on the Tibetan plateau is just a few degrees from turning into a muddy, unstable mush.

Such mush is called paludification by scientists, meaning the creation of a bog due to a rise in the water table. Paludification is one extreme, making the earth too viscous to bear weight, still less a full passenger train overhead. The other extreme is that of desiccation, the water draining from the soil too early in the year, before plant roots can reach it and grow. Either way, plants die, the rangeland degrades, and livestock have less and less to eat. The worst affected are the extraordinary *kobresia* sedges of the high plateau, cushiony grasses which are able to withstand the toughest climate and heavy grazing, and which come back year after year. But they cannot handle paludification or desiccation. The result is desert, and that is what a new generation of Chinese scientists is finding, all along the QTEC.

Environmental impacts of the railroad: Scientific findings

Forthcoming reports show that the accounts of the railroad and its harmony with the environment are very much in the eye of the beholder. Chinese scientists, from the same Cold and Arid Regions Environmental and Engineering Research Institute which designed the railroad, now report on its actual environmental impacts.³² The team sums up its findings: “During the past 50 years, permafrost has been degrading at a rapid rate due to the combined influences of steadily increasing human activities and persistent climatic warming, and extensive accelerated degradation has been observed along the QTEC.”

The report states that in many locations, the surface vegetation and the top soils have been completely removed or destroyed, and their absence has led to increased erosion, with extensive and serious environmental and engineering impacts. At sections where the vegetation and soils were severely damaged, it will take 20–30 years for alpine grasslands to recover their ecological structures and biodiversity similar to that of the original conditions, whereas it will take 45–60 years for the alpine meadows.³³

The four Chinese scientists conclude: “Environmental management and protection along the QTEC are urgent and important for the long-term stability of engineering foundations, and for sustainable development on the Qinghai-Tibet plateau. Proper protection and management require the development of a non-interference plan and acceleration in the enactment and enforcement of environmental protection (laws, regulations and stipulations) based on an extensive and thorough understanding and practical rehabilitation techniques for disturbed or damaged permafrost environments.”

These are serious long-term impacts that are hard to repair, reported by a team best equipped to know, since their institute has published hundreds of reports on which they draw. Little wonder an experienced pioneer such as Wu Ziwang worries and calls for better permafrost monitoring and maintenance.³⁴

The older generation made many sacrifices to open up new frontiers for China, and are officially praised as models for today’s generation who take China’s new wealth for granted. But often, within a political system that discourages accountability, their concerns are ignored.

The Lanzhou-based team from the State Key Laboratory of Frozen Soils Engineering, a lab set up for the sole purpose of engineering Tibet, supports Wu’s worries. An academic report by Chinese scientists states the following: “These environments have

been and are being changed, damaged, or in some cases, destroyed by the impacts from the construction of linear transportation infrastructures and other anthropogenic activities, by overgrazing from expanding flocks and herds of domestic animals, and by climate warming. The changes in the permafrost environments, some of them irreversible, in turn, have had and are having impacts on the long-term stability of the constructed engineering facilities/infrastructures.”³⁵

The construction of the Qinghai-Tibet highway in 1954 was a pioneering engineering effort traversing a lengthy distance (531 km) of warm (0 to -4°C) permafrost ground. In addition to unavoidable destruction of the vegetative mat on the actual roadway overlying the permafrost, the vegetative mats adjacent to the roadway also have been destroyed as the material was scraped up for the roadway and from nearby pits for construction materials. The roadway initiated the warming and thawing of the underlying permafrost and the destruction of the adjacent and nearby vegetation initiated similar warming and thawing processes in those areas. Whenever the roadway was straightened, rehabilitated or relocated because of the development of differential thaw settlement, excessive frost heaving or other problems developed, and the warming and thawing processes began again.

Other major construction projects also utilized the QTEC. The Golmud to Lhasa Oil Products Pipeline (GLOPP), which pumps gasoline, diesel and aviation fuels, was constructed during 1972–1977; the Lanzhou-Xining-Lhasa Fiber-Optics Cables (LXLFO) were installed in 1997; a 110-kV Transmission Line was installed in 2005–2006, and the Qinghai-Tibet railway was constructed during 2001–2006. The design of a new express highway from Xining to Lhasa is already underway with the beginning of construction anticipated within a few years. All of these infrastructures and activities are located within a narrow corridor.

China's fast-tracked program to replicate the US Interstate Highway system includes mandatory upgrading of the main highway into Tibet, from the north, in coming years, since other routes, such as the southern route from Sichuan to Lhasa, frequently suffer landslides of such enormity that no amount of engineering can keep the road open.

As the scientists note, the first highway made rail construction easier, now the existing rail line alongside makes upgrading the highway easier. But every time the QTEC is re-engineered, the impacts intensify. The scientists warn that these man-made impacts can, at worst, lead to desertification.³⁶ The Qinghai-Tibet railroad has had a much greater direct impact on the permafrost environment because of the massiveness of the construction project. However, it has had a much lesser indirect impact because it

is basically a closed transportation link for people, products and resources traveling between Golmud and Lhasa with, to date, only one passenger stop in between. Its railroad track and rail-bed maintenance crews are housed in pre-existing settlements. Its major indirect impacts on the permafrost environments may be in the greater channeling of surface runoffs and domestic flocks through the periodic underpasses in the built-up railroad bed, the development of auxiliary highways to now-economically exploitable natural resources, and the expansion of the Lhasa and Golmud towns. However, neither of them is within the permafrost zones.

The railroad and energy supplies

Official rationales for the rail line to Lhasa sometimes claim its environmental credentials include reduced Tibetan reliance on local wood and dried yak dung as fuels, thus sparing the environment. According to this logic, relying on long haul rail transport, itself a major user of fossil fuels, to haul coal to Lhasa, is a benefit to the environment.

Wang Taifu, an economics expert at the TAR Academy of Social Sciences, considers that construction of the railway will change the two main consumption structures of the plateau's residents' — fuel and food — thereby protecting the fragile local natural environment. In the pastoral and farming areas which account for 85% of the population, the principal fuel is dung. Residents of forested areas mainly burn wood, and people who live in semi-pastoral and semi-agricultural areas mainly burn dung, straw, and scrub plants as fuel. "It doesn't matter if it's dung or wood, scrubs and other vegetation being burnt, they can all cause serious damage to the natural environment," said Wang Taifu. "According to experts, after the railway goes into operation transportation costs are set to fall a great deal. Residents living within the surrounding 400 km will be able to use coal and natural gas instead of dung, wood and scrub, which will not only improve the quality of life for people on the plateau, it will also greatly reduce the reliance on natural fuels, and will thereby be beneficial to protecting and improving the local natural environment."³⁷

The reality is that very few areas along the rail route have been wooded for a very long time, and the destruction of Tibetan forests was done systematically, for decades, by the state, especially in the forested areas of eastern Tibet. The use of dried dung as fuel in the hearths of nomad tents has never caused grasslands to lose their sustainability; and indeed in the 1990s, wood was frequently burned by hotels and other establishments for heat and hot water.

Official media have given space to Chinese Academy of Social Science (CASS) specialists on industrialization, who praise the railroad as beneficial for the mutual industrialization of both Tibet and the mega-urban clusters where quarried Tibetan raw materials will be processed. Liu Kai, an expert at the CASS Industrial Economics Research Institute, said that the Qinghai-Tibet railway will have an important and far-reaching effect in six ways: promoting Tibet's economic trade both within and outside the region; reducing transport costs; promoting sustainable development in the tourism industry; speeding up the development and use of the region's mineral resources; and reducing regional [economic and developmental] differences.³⁸

Wang Taifu considers that after the railway is constructed, the consumption structures of Tibet's residents will change significantly, lessening environmental degradation brought about by residents' irrational behavior.

He says: "The arrival of the Qinghai-Tibet train will fundamentally improve Tibet's communications installations, significantly changing Tibet's urban and rural residents' consumption structures, promoting and improving Tibet's natural environment and realizing sustainable development."³⁹

But the burning of greenhouse-gas emitting fossil fuels to haul more greenhouse-gas-causing fuels to Lhasa, for the warmth and convenience of the growing immigrant population unused to Tibetan cold, hardly qualifies the Lhasa railroad as an 'environmentally-friendly' development. Specially-designed diesel engines were built to suck in and burn more oxygen in the thin air of Tibet as the train hauls its loads thousands of meters up onto the plateau. China's railways are major users, as well as the primary suppliers of fossil fuels all over China, as Chinese researchers have recently quantified.

As recently as 1993 China produced more oil than it could consume. China is now the world's biggest oil importer. Now the diesel fuel for the trains departing Beijing or Shanghai for Lhasa is as likely to come from Sudan or the Middle East as from Chinese or Tibetan oil fields. Chinese scientists say: "Transportation as the main oil consumer has been among the most rapidly growing energy users in the world, and the case has been more serious for the transportation sector in China. The rapid transportation development in China is largely responsible for the increasing oil demand, and China is expected to be more and more reliant on oil imports."⁴⁰

The demand on the part of high-salaried immigrants to the new cities in Tibet for all manner of comforts and manufactured goods already makes the TAR an energy-intensive, freight-intensive economy. In fact, the peak year for rail construction, 2005,

itself more than tripled the ton-kilometers of long-haul freight coming into Tibet. In the 20 years between 1985 and 2004 there was a doubling in the freight ton km, a measure of not only the amount of goods freighted in (and out) but also the distances those goods traveled. Then, in a single year, the amount trebled, from 1.23 billion ton km in 2004 to 4.19 billion freight ton km in 2005.⁴¹ While this in part is accounted for by increased exports from Tibet of chromite ores and traditional medicines, the main increase was in prefabricated steel rails affixed to cement sleepers, made far from Tibet, ready to lay on the new elevated railroad beds across Tibet.

Cement is also made in Lhasa, in energy-intensive factories that emit large quantities of greenhouse gases. Available hydropower is insufficient for these factories, which are essential to the urban construction boom across Tibet, now accelerated by the capacity of the train to bring close to one million visitors a year to Lhasa, visitors who need hotel beds and myriad facilities, all of which require concrete. TAR cement production was a quarter of a million tons in 1996, which doubled by 2000 to 493,000 tons, doubled again to 960,000 tons in 2004, and leapt by a further 39 per cent the next year to 1,373,000 tons.⁴² The furious pace of concreting means the import, by rail, of cement, which was common in the 1990s as inefficient Lhasa factories were undercut by imports, or importing the fuels — coal and oil, again by rail, to supply the Lhasa furnaces that make cement powder.

A 'green railway'?

Not all proponents of the Lhasa railroad rely on the energy-intensification of Tibet as an argument for the railroad. Writing in the prestigious international journal *Science* in April 2007, a team of Chinese authors take the opposite approach in support of their contention that this is 'An Environment-Friendly Railway.'⁴³ Repeating the official line, they too make a virtue of the necessity of handling permafrost by building lots of embankments and bridges, saying this was done as a wildlife biodiversity measure to ensure unimpeded seasonal migration of herds. They repeat the official figure that almost six percent of the total construction budget of 26 billion *yuan* (US \$3.5 billion) was "allocated to ecosystem restoration and environmental protection."

What was this substantial sum spent on? "To avoid disrupting the seasonal migration routes of animals, including the famous Tibetan antelope (*Pantholops hodgsonii*), planners added a network of tunnels to their blueprints. (See "The impact of the railroad on Tibetan wildlife: new threats to the 'high altitude Serengeti'", p. 211.) To minimize the negative impacts of the construction, the Chinese government implemented several

key measures: locations where earth was removed and construction sites were placed were carefully selected. Vegetation was then removed from these sites and was restored after the work was complete. Where possible, the railway path was directed around sensitive natural zones, and construction work was confined to the smallest possible area surrounding the railway.”

The authors also stated that planners detoured around wetlands and lakes wherever possible, and when this was not possible, they built bridges rather than surface routes to minimize the impact. They added that the number of stations established along the line was minimized to reduce the impact of human wastes, and water treatment facilities were installed at every station.”⁴⁴

These claims may be somewhat premature. Five decades of Chinese interventions in Tibetan landscapes, with ever more heavy earth-moving technologies, does not suggest that China fully understands, appreciates or respects the natural dynamics of subterranean water and ice, the causes and remedies of grassland degradation, the unpredictable flux of permafrost, the causes of debris flows, or landslides and erosion, in environments with which China has little familiarity.

Official accounts of the journey into the QTEC are lyrical in tone and at odds with scientific papers on the hazards of engineering on the plateau. The following account of an official press trip on the train in August 2007 was entitled: ‘Setting Foot on the Colorful Auspicious Road.’

The report stated (as received): “According to the schedule, part of journalists entered into Tibet by N917 train along the Qinghai-Tibet railway from Xining, Qinghai Province. As the train moved ahead, the altitude rose continuously, and the journalists felt deeply excited. The scene outside the window got increasingly open, so did the journalists’ frame of mind. Endless Gobi and desert, cliffs and crags, luxuriant grassland and numerous cow and sheep, snowy mountains, white cloud and blue sky all presented majestic beauty. [...] The train seemed to move on a painting which integrates the road and the scenery and is drawn together by mankind and nature.

“Equipped with comprehensive facilities, the train is safe and comfortable with staffs providing warm services. [...] The number of people getting access to such grand scenery increases considerably, while the plateau does not lose its real look thanks to the coordination of tourism development with environmental protection. The railway serves as a bridge between the plateau and the outside world and a link between mankind and nature.”⁴⁵



The Chinese government's dream of transforming the central Tibetan economy has just begun. Next to the transportation of industrial products the tourist industry is the greatest beneficiary of the railroad to Lhasa. Here, Chinese tourists and workers at Lhasa station board the morning train to Xining. (July 2007.) IMAGE: ICT.

Although debate has been suppressed about the railroad's construction and its impact, even some officials from the Ministry of Railways, and at least one senior engineer, have spoken about the detrimental impact that the railway is likely to have on Tibet's fragile ecology. For instance, the Ministry of Railways said in 2001 that construction of the railway would have a "devastating impact" on fragile areas of the permafrost region, while a senior engineer warned that damage caused to "the delicate ecological environment" of watershed areas "will be very difficult to recover, imposing a significant impact in the downstream areas."⁴⁶

There is evidence that at a central level, the authorities are concerned about the impacts to the environment from the railway, although the level of concern is not known. Just over a year after the opening of the railroad, a 'study and investigation group' was sent from Beijing to "inspect the ecological environmental protection along the Qinghai-Tibet railway and the operations of the railway line" as well as other related ecological issues. Led by National People's Congress (NPC) Vice Chairman Ragdi (Chinese: Redi) and NPC Standing Committee Vice Chairman and Secretary General Sheng Huaren, the group went to pastoral areas to inspect "the construction of a new countryside". They concluded that the Tibetan environment was "very important", but one of the solutions proposed appeared inadequate, to say the least: "the need to further strengthen foreign-oriented propaganda on Tibet".⁴⁷

Is it possible to say wildlife migrations are undisturbed, as officials claim, or that the shaving of living turf and its replacement, as a mat, after completion of earthworks, has been a success? What has been the impact of the extensive use of explosives?⁴⁸ If it is so easy to restore grasslands, why has this not been done on the vast areas degraded in recent decades? Reducing the number of stations en route is presented as a benefit to the environment. However, this argument contradicts the frequent claim in official media that the railroad gives Tibetans living near the rail line access to markets and new opportunities for the creation of wealth.

The single rail line is still an experiment in process, with no scientific certainty that it will work where highways consistently failed. They failed the test of environmental impact, of safety to drivers and traffic, and of productivity. Whether the rail line will prove itself to be 'green', despite its destructive construction methods, is as yet unknown.

The same scientists who designed and tested the railroad now continue to monitor it. Many of the authors cited in this section are from the State Key Laboratory of Frozen Soil Engineering, of the Cold and Arid Regions Environmental and Engineering Research Institute (CAREERI) at the Chinese Academy of Sciences.

The science is ongoing, producing results at variance with official propaganda. But the science is communicated in academic terms, in obscure journals rarely seen in the West except by specialists; while the propaganda loudly proclaims the success of a 'green' railroad, just as the 2008 Olympics is certain to describe itself, whatever happens, as a 'green' Olympics.

The proclaimed environmental credentials of the railroad are intended to be 'Exhibit A' of China's successful modernization. In a piece entitled 'Sky Train: Start for New

Legend', the Chinese writer Zhang Peng wrote (as received): "It's a world famous railway. This is a moment for blessing. The construction quality in frozen earth has reached the world's top level. [...] The Qinghai-Tibet railway does not fail to live up to the Party and nation's expectation. It wins honor for Chinese nation with remarkable achievement. This is a memorable moment. This golden road leads the whole people on the plateau to a bright future and it leaves shines on the blueprint of harmonious railway construction. Railway writes a new chapter in China and even the world history of railway construction with great achievements. The CPC Central Government and State Council have great expectation and strict order to railway builders. Today, a scene of rail, trains, blue sky, clouds, grass, wild animals is formed the prettiest view on the snowland. Railway builders will promote the spirit 'challenging limit, keeping forward' and strive to build first-class environment protection, operation management and benefits on the third pole of the earth."⁴⁹

Significantly, although the rail line between Xining and Golmud is to be double tracked, there are no plans announced so far for any double tracking of the line onwards from Golmud to Lhasa. (See 'A golden path to prosperity? The political and economic significance of the 'Sky Train' to China's rise and to Tibet', p. 9.) Instead, an expressway is to be constructed, along the same QTEC, the next massive intervention in a fragile landscape. The Chinese scientists from CAREERI are watching and gathering data in the hope of determining whether the triumphant conquest of nature is as decisive as the official version insists. At the least, the nationalist triumphalism is premature.

Mining along the railroad and its environmental impact

At the highest policy-making level in China, there is tension between the acceleration of plans to exploit Tibet's resources and the need to protect the fragile environment of the Tibetan plateau. As this report has shown, the focus of the Western Development Strategy is resource exploitation, driven by the need to meet domestic demand as well as by political aims of integration and assimilation to ensure stability. Given this basis to Beijing's planning, an issue as complex and long-term as environmental protection is likely to be subordinated to, for instance, the construction of a new rail spur enabling exploitation of a particular mine or the development of a major new resource.

Environmental issues remain secondary to successful completion of the main projects of the Western Development Strategy, most of which are concerned with large-scale infrastructure construction and resource exploitation.

That said, the state is becoming more aware of the long-term economic costs of poor environmental practice, and threats to economic interests can add weight to central concerns over environmental problems.

The types of damage caused by mining fall into several broad categories which are generally seen throughout all of Tibet, if not all of the PRC.

- Accidents or deliberate actions causing damage to land from digging, including the destruction of mountain slopes and grass cover. Large areas of the Tibetan plateau have a very thin topsoil, which when stripped away to reach rocks beneath can take 20 to 60 years to recover.
- Great loss and waste of natural resources. In many of the smaller mining operations undertaken in Tibet, there is a tendency to try and mine the most accessible deposits in a mining area first, often making a more controlled and measured recovery of other deposits impossible.
- Use and dispersal of toxic chemicals. Cyanide and mercury are widely used in gold-mining procedures in particular. Both substances are highly toxic, and can easily contaminate water resources for people and livestock.
- Disturbance of groundwater resources. Digging in parts of the plateau can interrupt and stem the flow of aquifers and underground streams which can in turn disrupt the availability of standing water or water flows for people and livestock.
- Landslides. Even the best-planned excavations can lead to unforeseen landslides and rockslides, which can disrupt the ecology on whole mountainsides.
- Hunting. Mining teams have been held responsible for the decimation of wildlife for food and for sport, including endangered animals.
- Littering. There is little apparent attempt to clear the daily refuse of the work teams in some mining areas in Tibet, where large quantities of non-perishable waste such as paper and plastic are left behind.⁵⁰

Efforts to clamp down on mining and reassert control by the central authorities have gathered strength as officials have become more aware of the economic implications of increased access to resources since the opening of the railway. They seem particularly to have noted the illegal mining of state resources and the waste of irreplaceable



An image provided from inside the Shethongmon (Chinese: Xietongmen) copper mining project near Shigatse (Chinese: Xigaze) in the TAR, run by Canada's Hunter Dickinson Inc. through its subsidiaries of Continental Minerals and Tibet Tianyuan Minerals Exploration, Ltd. Once officially in operation, the mine is expected to have an annual production of 1.17 million ounces of silver, 116 million pounds of copper, and 190,000 ounces of gold. IMAGE PROVIDED BY A VISITOR TO THE AREA.

minerals through unregulated exploitation.

The Chinese authorities in the TAR have started to issue measures to curb some of the worst effects of mining on the environment. In June 2007, for example, the TAR government announced a ban on the mining of mercury, arsenic and peat, as well as alluvial gold, that is, gold which is found in river beds and other water courses. "Mercury and arsenic mining can pollute water supplies, peat mining can destroy wetlands and gold mining can ruin grasslands and rivers," said Wang Baosheng, director of the TAR Land and Resources Department, when announcing the ban.⁵¹

Gold mining in particular can have a disastrous effect on the environment when undertaken by private prospectors or by local authorities hoping to make a quick profit. In areas with a particularly sensitive ecology, the rush of people into an area looking for gold can be catastrophic. For instance, in February 2002, the official press in Qinghai Province reported that 20,000 people a year were flooding in to look for gold in the river beds and sands of the 'three river sources area', where the Yangtze, Yellow and Mekong Rivers all rise. The prompted the government to ban private miners from these gold fields.⁵²

And in March 2007 the TAR government issued a notice requiring all mining operations, even those that had already been approved, to submit an environmental protection plan. The plans must describe in detail the scope and scale of the mining operation and what measures will be taken to effectively protect and restore the environment affected by the mining project, with the threat that mining operations will be halted if there is avoidable environmental damage.⁵³

However well-intentioned these regulations may be, mining companies can avoid going to higher tiers of government to seek approval for mining activities, when permission is far more likely to be granted by a lower county or township government which would be grateful for the revenue generated, and maybe even tempted to invest in a mining operations themselves. The Chinese writer Wang Lixiong claims that prospectors often choose to approach lower tiers of government because lower governments are less likely to know what minerals are available in their jurisdictions and therefore likely to charge mining companies less for use of the land.⁵⁴

The issue of local governments and officials holding a financial interest in mines came to the fore in 2005 and 2006 during a spate of fatal mining accidents throughout the PRC. A characteristic shared by many of the mines involved was that they were owned in part by government departments or officials responsible for safety inspections. In the rush to profit, particularly from coal in China's energy-hungry market, safety measures were neglected to the extent that mining accidents became and remain unduly common — in 2005 for example, 80% of the world's reported mining fatalities occurred in the PRC.⁵⁵

Orders from the central government for local governments and government officials to divest their interests in mines in the name of safety by August 2005 were largely ignored, and almost a year later the central government was still struggling to convince officials to divest — while accidents with multiple fatalities and judged avoidable were still occurring.⁵⁶

Ensuring 'social stability' through mining

A notice issued by the TAR government in November 2007 called on local governments to "further strengthen their management of mineral prospecting and exploitation activities" in order to protect the environment and to "preserve social stability". The notice reportedly called on local governments to tighten the supervision of areas under their jurisdiction where mineral resources are found; but governments were also

expected to “actively educate the peasant and herding masses to support prospectors and miners who are legally engaged in prospecting and mining for mineral resources”. Governments were further encouraged in the notice to “make full use of newspapers, television and radio to broadly propagandize laws and regulations on mining”, and people were also encouraged to report illegal mining activities.⁵⁷ The notice is a strong indication that popular protests against mining, although generally not reported in the official press, are rising in the TAR.

It is also a cause of deep resentment for Tibetans when mining operations encroach upon and damage — or even completely destroy — sites regarded as sacred, such as holy mountains.⁵⁸ According to popular beliefs in Tibet, the mountains, rocks, waters, plants and soil of the Tibetan plateau are inhabited by various spirits and deities who can become malevolent if they are not propitiated or still more if they are offended. Mining by its very nature disturbs natural balances in land and water resources, and any unfortunate occurrences are frequently blamed on spirits supposedly angered by mining. For instance, gold mining around Lake Manasarovar in the far west of Tibet was reportedly stopped in 1990 when locals blamed an outbreak of smallpox on the presiding deity.⁵⁹ Lake Manasarovar adjoins Mount Kailash, one of the holiest mountain sites in Tibet for Buddhists and also for Hindu pilgrims from India and Nepal.

Protesting against mining can be extremely dangerous for Tibetans. The Chinese Constitution unequivocally states that all natural resources are the property of the state, and protests by Tibetans against mining have been interpreted by the Chinese authorities as a protest against the state — a “splittist” crime. This is particularly so when protests against mining projects have apparently been fueled by — or at least expressed through — religious sentiment, which the Chinese authorities regard as underpinning nationalism and “splittist” intent among Tibetans.

For instance, Kabukye Rinpoche, a *tulku* at Nabzur Monastery in Lithang County (Chinese: Litang) in Sichuan Province — in the Tibetan region of Kham — reportedly lodged protests with the local authorities covering a range of complaints surrounding mining operations close to his monastery. These included concerns about how blasting close to the monastery was causing problems for the local nomads and their livestock, concerns that mining was eroding grasslands, and concerns at the number of Chinese migrant workers entering the area to work the mine. Kabukye Rinpoche was detained on June 10, 1996 ostensibly on suspicion of posting pro-Tibet independence posters in Lithang, a charge which he reportedly denied. He was eventually sentenced to six years imprisonment on charges of “splittism”, and was released in 2002.⁶⁰

In May 2007, several hundred Tibetans demonstrated in protest when a mine owner began excavating Yala Mountain in Kardze Tibetan Autonomous Prefecture (Chinese: Ganzi TAP) in eastern Tibet. Yala Mountain is sacred to Tibetan Buddhists, and it was being mined for lead and zinc. A group of eight elderly people had reportedly tried to protest through recognized channels, legally petitioning the Sichuan provincial government in Chengdu, but they disappeared and were presumed to have been arrested.⁶¹ Notably, although the protesters probably had religious objections to the excavations, they complained that the mining “caused environmental degradation, killed endangered animals and drove away tourists”⁶², couching their appeal in terms of economic and environmental concerns that would be more likely to get a hearing from officials.

Unusually, China’s official press reported the demonstration, but made no mention of the facts that the protesters were Tibetan and that Yala Mountain is a holy site. “About 300 villagers smashed mining equipment, destroyed cars, hurled stones at police and attacked members of the working teams in an attempt to halt exploitation of a lead and zinc mine,” a report by Xinhua said.⁶³

Mining companies have been known to try to allay such concerns. The Tibetan writer Woesser has recounted how a senior lama was persuaded to perform a ceremony to move spirits from a local holy mountain where mining was supposed to start, so that the local population’s concerns would be appeased. The lama was reportedly not well-liked by local people because he readily obeyed the local authorities’ orders to regularly denounce the Dalai Lama. Woesser recalls how an old man living close to the mountain said to the lama that seeing as he could persuade these mountain spirits to leave, could he also persuade the spirits in far away Mount Kailash to come instead as he was getting too old to make the pilgrimage.⁶⁴

PERSPECTIVES: MINING, ROADS AND THE RAILWAY

The environmental destruction brought about by mining activities is a cause of deep resentment among Tibetans living close to mining areas. A young Tibetan student who was studying in the Chinese interior expressed his concerns about a mine near his home area in Tibet when he returned there during his summer break soon after the railway opened in 2006. His comments were included on a Chinese language website:

The young student reports walking along a newly-built road and coming across an area where a work team had spent the night. He recalled seeing that the work team

had “left behind soda cans, old boots, milk cartons, sacks of calcium carbonate [used in road-building]... and there was polystyrene everywhere, seriously affecting the natural environment.” He goes on to note that in the contract signed by the local township and the mining company — based in Hunan Province in the Chinese interior — mining operations were strictly prohibited on nomads’ summer pastures and near major water sources, and yet, “none of this was respected in the slightest and the environment was seriously damaged. For example, the summer pasture was dug over and seriously damaged.” He noted also that miners had been picking large quantities of medicinal plants from the grasslands, a procedure which can also be very destructive.⁶⁵

The project visited by the student was only one of 30 similar projects being undertaken at the same time in Tibet by that one Hunanese company, the foreman told the student. The foreman added, “This was before the train, but now that the train has come there are going to be many more.”

PERSPECTIVES: MINING AND SACRED SITES

A young farmer from the TAR told ICT about mining activities near a Tibetan monastery and pilgrimage site. Local communities are typically excluded from the planning, with Tibetans having little or no say in how the projects are carried out, and local Tibetans seeking employment are passed over in favor of Chinese workers from other provinces.

“Another major objective of the Chinese government in extending the railway to Shigatse is that they want to plunder the mines in the areas. At Nyangra Township under Namling County [Chinese: *Nanmulin*, in Shigatse Prefecture], the Chinese are extracting hard rock [Tibetan: *chakdo*]. About 10 to 15 truck-loads of black rocks are taken daily to Golmud from the county. Most people employed there are Chinese. It was started in 2005 and the Chinese are still digging and transporting it all to China with heavy vehicles.

From 2002 to 2004, at least 100 Chinese miners extracted gold (we believe it was gold, but no Tibetans have seen the materials that the Chinese extracted from the mountain). The Chinese miners were in army uniforms and they excavated mines for two consecutive years.

Sokpo Monastery is located on the other side of this mountain. This monastery

accommodates about 15 monks. It is about two days walk from Phodam Township in Namling County. The monastery is built near these areas, which are traditionally considered very holy pilgrimage areas for Tibetans, and Tibetans all over Tibet visit there on pilgrimage. It also has many statues of Guru Rinpoche and I myself have gone for pilgrimage to these areas in 2004. The road leading to this monastery used to be very rough and now it has improved a lot due to the Chinese mining works. Later, the monks of Sokpo Monastery and resident Tibetans raised serious concerns over the continuous mining by the Chinese. They also conveyed that due to unrestrained mining, the monastery could be severely damaged since it is located just behind the mining site. The Tibetans in the area have expressed strong disappointment at the destruction of holy pilgrimage sites. It's quite difficult to get into the monastery if one does not know the way. Now, the Chinese have reportedly halted excavation at these holy pilgrim mountain areas.

In 2003, the Chinese attempted to dig close by a mountain opposite Sebu Monastery, which is under Phu Township, Namling County. The monastery is located about 3 km from the township and it has about 50 to 60 residents [Tibetan: *Ngagpas*]. However, lamas and township leaders have not allowed them to extract mines from there.

Miners are usually Chinese nationals who come from China. Local or resident Tibetans are not consulted about mining projects. Chinese miners mainly discuss these issues or mining work with the township leaders, who work under the guidance of the county leadership.

Chinese miners first visit different mountain areas with the help of local Tibetans for a preliminary examination and then collect samples from different mountains and return back to China. They normally collect samples in September and October. Initially, two to three Chinese come, then the township leaders help them hire some local Tibetans to find routes to possible mining areas, and then they hire horses and go searching for three to five days. They are equipped with tents, food etc.

Lama Mountain is a day-long walk from Tana township where Chinese miners have searched and we heard that Chinese miners have found oil there. The color of the mountain is red. Some people say that there is gold there. In 2004, our township leaders associated with the Chinese miners constructed roads and now we can reach the Lama Mountain in 3 hours by truck. The township leaders are of the view that this road will help the local nomadic Tibetan families and it was constructed for the convenience of nomadic people. However, it's for sure that it was constructed



An image provided from inside the Shethongmon (Chinese: Xietongmen) copper mining project near Shigatse (Chinese: Xigaze) in the TAR, run by Canada's Hunter Dickinson Inc. through its subsidiaries of Continental Minerals and Tibet Tianyuan Minerals Exploration, Ltd. Once officially in operation, the mine is expected to have an annual production of 1.17 million ounces of silver, 116 million pounds of copper, and 190,000 ounces of gold. IMAGE PROVIDED BY A VISITOR TO THE AREA.

not for the welfare and convenience of local nomadic families but for mining purposes only.”

PERSPECTIVES: HOW MINING HAS DEGRADED THE ENVIRONMENT; TIBETAN DESPAIR

An ex-political prisoner spoke to ICT about mineral extraction in the TAR. Rather than benefiting the local economy, he told ICT that mining projects have contaminated drinking water and degraded the environment while extracting valuable resources. He also said that workers in the mine are mainly from Sichuan Province.

“Compared to before, the village appearance has improved with new buildings, but inside there was no improvement as income has increased proportionally to inflation. Just by looking at new houses, any outsider would assume that conditions have improved, but the actual living conditions of the village dwellers have not.

What little improvements that have occurred are minimal, considering the amount of mineral resources the Chinese extract from Tibet. In Medro Gongkar [Chinese:



Existing main railroad lines, and towns and cities in Tibetan areas mentioned throughout this report.

Mozhu Gongka], in Lhasa Municipality in the TAR alone, there are four mineral excavation sites. The biggest site is in Gyama and excavation at that site started in 1991. The main mineral is iron ore and according the Chinese statistics this mineral site would supply iron ore for 20 years. In one day, about 72 truck-loads are extracted and extraction would continue for nine months out of a year. The roads freeze in the winter, so work gets halted until the freeze thaws. People say the Chinese initially extracted a diamond the size of a cigarette carton and after that they started extracting iron ore.

The road-building started in 1991 and it was specifically aimed at transporting minerals. So far, little more than 10 Chinese mine workers have died and rumor has it that workers cannot make loud noises around the area as it can induce mysterious hailstorms. People also say that a possessed Tibetan woman appears at Chinese workers' tents and that she tears the tents apart with her long fingernails. The Chinese do not believe in such things and they don't care about other Chinese dying, so now during the day the mine site is so noisy and its environment damaged.

The waste from the site, mainly iron ore wastes, is piled into big heaps and when it rains, water would carry particles down to the local river and contaminate it. Many

domesticated animals have died from drinking water from these water sources. The whole place would be contaminated with the smell from the mine.

Another mineral extracted from a different site around Medro was copper. In one day about seven truck loads are carried away from that site. Iron ore and lead are extracted from two other mine sites. The iron ore is transported to an area called Chaga, about 20 km away from Medro. You can earn about 40 *yuan* [US \$5.40] per ton for transporting iron ore to that factory.

Another thing that happens at the mine site is that every month, about two to three huge 18-wheeled trucks are loaded with some precious stones, which are taken to Lhasa's biggest army station. These precious stones are carefully put into sacks, which are then sealed with stamps. These sacks are then placed in boxes and then into trucks, which are driven with two jeep escorts to the biggest army station in Lhasa. Truck drivers are not allowed to enter the army station, they are asked to wait at the gate and an army officer drives the truck in and returns the empty truck.

The only way locals can benefit is by transporting minerals using their own vehicles, so there are many people who have bought vehicles with loans in hope of earning a little extra money. Since 1991, officials have been saying that minerals will run out after 20 years and it will cause water sources to dry out. If it is true, farmers will not be able to survive on the land anymore. The environment has already changed, as there are no more wild animals since the Chinese workers have been killing them, though Chinese law prohibits the killing of [endangered] animals.

Most workers are from Sichuan Province, but they stay in the area throughout the year. There are about 80 to 90 Chinese who have been living in our area since the start of the excavation project. Chinese workers are paid about 90 *yuan* [US \$12.18] per day, while we would get only 20 *yuan* [US \$2.70].

Complaints get ignored so there is no point in approaching higher authorities.

There are a few Tibetan mine workers. And there are some in the management circle of the excavation team, but they too have to approach higher Chinese personnel, which makes it pointless to complain.”

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- ¹ 'Directory of Major Chinese Research Centers', New World Press, Beijing, 1991 (1st edition), p. 67.
- ² Xining stands on the Tibetan plateau, but it has never been regarded as a part of traditional Tibet. Historically, Xining was a major commercial center on the Silk Road and as a result it was founded on trade and cultural exchanges between Tibetans, Han and Hui Muslim Chinese, Mongolians, and other peoples.
- ³ Ma Bufang (1903–1975) was a warlord who ruled large parts of what is now the northwestern PRC during China's republican period between the end of the imperial system in 1911 and the communist revolution of 1949.
- ⁴ 'PetroChina Prepares for Future Downstream Expansion', Steven Knell, *Global Insight Daily Analysis*, August 30, 2005, available at: www.globalinsight.com.
- ⁵ A group of Chinese film directors emerged in the mid-1980s who essentially re-invented and re-defined Chinese cinema. Among these directors was Chen Kaige, whose 1984 film *Yellow Earth* was set in the loess hills. Chen Kaige was later criticized for damaging the natural environment in a pristine area of Yunnan province by building roads around a lake where he was filming in 2006.
- ⁶ Ultimately, this proposal did not get off the ground. The China Western Poverty Reduction Project, proposed by China in 1998, was stalled in 2000 due to political controversy — the project involved the relocation of nearly 60,000 mainly ethnic Chinese farmers into a Tibetan area, Tulan (Chinese: Dulan) county in Tsonub Mongolian and Tibetan Autonomous Prefecture (Chinese: Haixi M&TAP). This would have set a disturbing precedent of an international financial institution supporting China's policies of economic development and demographic restructuring on the Tibetan plateau. See Tibetan Environmental Watch (www.tew.org) for further information.
- ⁷ 'The Dragon's Village: An autobiographical novel of revolutionary China', Yuan-tsung Chen, The Women's Press, London, 1981, p. 68.
- ⁸ World Bank, China: Western Poverty Reduction Project, 'Project Information Document,' 3 May 1999, available at: www.worldbank.org.
- ⁹ World Bank, China: Western Poverty Reduction Project, 'Environmental Information Package,' 1999, available at: www.worldbank.org.
- ¹⁰ Lhamotso's story is featured in the book 'Heavy Earth, Golden Sky: Tibetan women speak about their lives', edited by C. Michelle Kleisath, 2007 Shem Women's Group U.S.A., available to order from www.lulu.com; and see also <http://shemgroup.org>. Shem is a women's group dedicated to empowering Tibetan women and their communities through grassroots development.
- ¹¹ 'Extremely Endangered Wildlife on Qinghai Lake', Xinhua, August 7, 2003, available at: www.china.org.cn.
- ¹² 'Tibet railway threatens Qinghai Lake', AsiaNews.it, November 3, 2006, archived at Tibet Environment Watch, available at: www.tew.org.
- ¹³ *Ibid*.
- ¹⁴ The rail route was designed to facilitate access for heavy machinery and equipment needed to build this 'third front', as Mao called it, far from the more vulnerable fronts China had along a coast patrolled by the US Navy and along its northern borders with the Soviet Union, denounced for having broken with Stalinism.
- ¹⁵ See also an account by the London *Times* correspondent Jane MacCartney of a visit to the museum there: 'Tourists get a glimpse of secret nuclear past', *The Times*, August 11, 2007, available at: www.timesonline.co.uk.
- ¹⁶ "'Atomic Bomb Town' Woos Foreign Investment', Xinhua, April 1, 1999.
- ¹⁷ 'Mining Tibet: Mineral Exploitation in Tibetan Areas of the PRC', Tibet Information Network, London, 2002, p. 19.

- ¹⁸ Qinghai Statistical Yearbook 2006, table 3-21 (the actual number of employees at the mine is 2984).
- ¹⁹ 'Qinghai Statistical Yearbook 2007', China Statistics Press.
- ²⁰ *Ibid.*
- ²¹ Agip (Azienda Generale Italiana Petroli) is a subsidiary of Eni, an Italian multinational oil and gas company.
- ²² 'Construction begins on Tibet's biggest logistics center', Xinhua, September 9, 2007, available at: www.chinadaily.com.cn.
- ²³ 'Harrowing Tale of Tragic Accident', *China Daily*, March 1, 2007, available at: www.chinadaily.com.cn. A journalist on board told what happened: "As someone called for the train attendant about 2 am to fix a window broken by wind-borne sand, Shi turned on her cell phone. Then, in a split second, the carriage flipped to one side. 'Before I realized it, I was thrown to the back of the middle berth,' she said. 'I was unconscious for a while, and then suddenly people all began shouting and crying. Scraps of glass were under our feet, and the wind came through broke windows making the temperature drop sharply. We were afraid the carriage would overturn again in the gale. So every one squatted and wrapped ourselves with quilts, waiting for someone to tell us what to do.' Later she learned she was lucky to be alive because several other carriages turned upside down. The passengers squatted for almost 4 hours before being rescued by police at 6 am. 'During the long, cold wait for the rescue, a railway policeman crawled along the luggage rack around 4 am, asking whether anyone was hurt,' she said."
- ²⁴ 'More train services cancelled as strong winds buffet NW China', Xinhua, March 2, 2007.
- ²⁵ Tibet Statistical Yearbook 2006, table 12-2.
- ²⁶ *Ibid.*, table 12-1.
- ²⁷ See for example: Huc, Evariste and Gabet, Jean; *Travels in Tartary, Thibet and China, 1844–1846*; Przewalski, Niklai; *Reisen in Tibet am oberen Lauf des Gelben Flusses in den Jahren 1879 bis 1880*, Hermann Costernoble; Grenard, F. *Tibet, the country and its inhabitants*, 1903; Rockhill, Joseph; *Diary of a Journey through Mongolia and Tibet in 1891 and 1892*; and Hedin, Sven; *Central Asia & Tibet*, 2 vols, 1903.
- ²⁸ 'Outline of the Tibet Autonomous Region's Five-Year Plan for Economic and Social Development and its Long Term Target for 2010', approved by the fourth session of the Sixth Regional People's Congress on May 24, 1996, *Tibet Daily*, section II.
- ²⁹ 'Slope instability phenomena in permafrost regions of Qinghai-Tibet Plateau, China', Ma Wei, Niu Fujun, Akagawa Satoshi and Jin Dewu, *Landslides* (2006) 3:260–264.
- ³⁰ *Ibid.*, pp. 261–262.
- ³¹ 'Train to the Roof of the World', David Wolman, July 14, 2006, *Wired Magazine*, available at: www.wired.com.
- ³² 'Changes in permafrost environments along the Qinghai-Tibet Engineering Corridor induced by anthropogenic activities and climate warming', Jin Hui-jun, Yu Qi-hao, Wang Shao-ling, Lu Lanzhi, *Cold Regions Science and Technology* (forthcoming), doi: 10.1016/j.coldregions.2007.07.005.
- ³³ The Qinghai-Tibet plateau is very sensitive to climate change (Cheng et al., 1998; Feng et al., 1998; Zheng et al., 2002; Kang et al., 2007), and recently there has been a shrinkage of alpine meadows in Qinghai Province (Klein et al., 2004) and of the wetlands area on the Qinghai-Tibet plateau of about 20% (Chen et al., 2002), and extensive permafrost degradation along the QTEC (Jin et al., 2006).
- ³⁴ 'Train to the Roof of the World', David Wolman, July 14, 2006, *Wired Magazine*, available at: www.wired.com.
- ³⁵ Source as endnote 32.
- ³⁶ *Ibid.*

- ³⁷ 'What will the railway bring to Tibet?' [青藏铁路将给西藏带来什么?] Xinhua, January 22, 2005, available (in Chinese) at: www.xinhuanet.com.
- ³⁸ *Ibid.*
- ³⁹ *Ibid.*
- ⁴⁰ 'Exergy analysis of energy utilization in the transportation sector in China', Xi Ji and G.Q. Chen; *Energy Policy* 34 (2006) 1710–12.
- ⁴¹ Source as endnote 25.
- ⁴² *Ibid.*, table 10-16, Output of main industrial products.
- ⁴³ 'Building a "Green" Railway in China', Changhui Peng, Hua Ouyang, Qiong Gao, Yuan Jiang, Feng Zhang, Jun Li, Qiang Yu, *Science*, vol 316, 27 April 2007, pp. 546–547.
- ⁴⁴ *Ibid.*
- ⁴⁵ 'Foreign journalists witness the changes of Tibet', Xinhua, August 10, 2007, available at: <http://en.tibet.cn>.
- ⁴⁶ 'Crossing the Line: China's Railway to Lhasa, Tibet', International Campaign for Tibet, 2003, p. 39. Available at: www.savetibet.org.
- ⁴⁷ 'When Conducting an Investigation and Study in Tibet, a National People's Congress Standing Committee Investigation and Study Group Points Out the Need To Implement the Scientific Development Concept in an In-Depth Manner and Further Improve the Actual Work Results of the People's Congress', Xinhua, August 13, 2007.
- ⁴⁸ 'Basic principles of railway-trench excavation by blasting in plateau frost soil zone', Gu, Y.C., Feng, S.Y., 2001, *China Railway Science* 22 (6), pp. 95–99; 'Study on Construction Technology for cutting blasting in high-ice-content permafrost region at Kunlun Mountain pass on Qinghai-Tibet railway', Wang, Y.Y., 2003, *Journal of Glaciology and Geocryology* 25 (1), pp. 100–105.
- ⁴⁹ 'Sky road: Start for new legend', Zheng Peng, China Tibet Information Center, 12 July 2007, available at: <http://info.tibet.cn>.
- ⁵⁰ Source as endnote 17, p. 149.
- ⁵¹ 'Tibet Set to Ban Gold Mining to Protect Environment', June 13, 2007, Xinhua, available at: www.sepa.gov.cn.
- ⁵² Source as endnote 17, pp. 171–173.
- ⁵³ 'Mining prospectors must first clear an environmental hurdle' [矿产勘查须先过环保关], March 23, 2007, Xinhuanet, available (in Chinese) at: www.chinatibetnews.com.
- ⁵⁴ 'Wang Lixiong: Tibet's rivers and mountains as a casino' [王力雄: 西藏山河做赌场], April 22, 2007, Wang Lixiong, available (in Chinese) at: www.peacehall.com.
- ⁵⁵ For a fuller discussion of labor rights and mining in the PRC, see China Labor Watch, at: www.chinalabor-watch.org.
- ⁵⁶ 'Chinese officials withdraw 620 mln yuan from coal mines', June 26, 2006, *People's Daily*, available at: <http://english.peopledaily.com.cn>.
- ⁵⁷ 'Tibet to strictly manage mineral resource exploitation, protect the natural environment [西藏将严管矿产资源开发 保护生态环境]', November 19, 2007, Xinhua, available (in Chinese) at: www.xz.xinhuanet.com.
- ⁵⁸ In an unfortunate clash of interests, some observers suggest that what might contribute to a mountain being considered holy by a Tibetan Buddhist, such as its color or unusual rock formations, can be due to the fact that the mountain is a source of certain minerals or ores not otherwise found in the immediate vicinity.

⁵⁹Source as endnote 17, pp. 111–113.

⁶⁰*Ibid.*, pp. 103–104.

⁶¹'Tibetans riot over exploitation of sacred mountain', Reuters, June 11, 2007, available at: www.reuters.com.

⁶²'Five questioned in riot over sacred mountain-Xinhua', Reuters, June 25, 2007, available at: www.reuters.com.

⁶³*Ibid.*

⁶⁴Stories of mining in Tibet [在西藏开矿的故事], Woeser, April 21, 2007, available at: <http://woeser.middle-way.net>.

⁶⁵'Report on a survey from northern Tibet: a day in Jiangweng Songduo — notes from a mining area in Ningzhong Township' [来自藏北的调查报告: 江翁松多的一天 - 记宁中乡的一个矿区点], published February 24, 2007, available (in Chinese) at: <http://woeser.middle-way.net>.



More and more Tibetans are dependent upon collecting the fungus known as *yartsa gunbu* to earn a living, particularly as they face the loss of their land and their livelihoods and increasing competition with Chinese migrant workers for employment. This image depicts Tibetans and Chinese buying and selling the fungus, the name for which translates as 'winter worm, summer grass', on the street in Nagchu (Chinese: Naqu) in summer 2007. The railroad has facilitated easier access for *yartsa gunbu* traders. IMAGE: ICT.

'WINTER WORM, SUMMER GRASS'

The risks of dependency on *yartsa gunbu* trade and increased competition from Chinese traders

AFTER THE LOSS OF THEIR LAND and their livelihoods, ill-prepared to compete with Chinese migrant workers for employment, more and more Tibetans depend on collecting the fungus known as *yartsa gunbu* to earn a living. *Yartsa gunbu*, which in Tibetan means 'winter worm, summer grass', is bought by traders and sold to pharmaceutical companies and Chinese medicine clinics across China. It is prized for its medicinal properties that many believe fight cancer and aging, and improve male virility.¹

Even in this sphere, Tibetans face competition from Chinese and Chinese Hui Muslim traders in collecting *yartsa gunbu* and acting as middlemen to take the fungus to market, according to reports received by ICT. In some areas, Tibetans have set up roadblocks and taken other measures to prevent Chinese workers from participating in collection.² According to one survey, during the growing season in 2007, some 500,000 people were looking for *yartsa gunbu* in 18 counties surveyed in the TAR, Qinghai, Sichuan, Gansu and Yunnan Provinces.³ There are some fears about the sustainability of collection.⁴

The railroad has affected the trade. More migrant laborers are coming into Tibet on the railroad, thus increasing competition for the collection and sale of *yartsa gunbu*, and it has also become easier to export the fungus.

The increased trade in *yartsa gunbu* has led some local officials restrict its collection. Most areas require that collectors purchase a license, while other areas have implemented residency restrictions to deter outsiders from collecting in the local area.

Yartsa gunbu (*Cordyceps sinensis*) is endemic to the Tibetan plateau as well as surrounding areas in Nepal, India and Bhutan. The fungal spores spread through the air to a host caterpillar, turning it into a stiff, 5–15 cm long 'grass' that is then dug out of the ground — the plant is also popularly known as 'caterpillar fungus'. The trade can provide some nomad families with up to half of their yearly income.

Groups of Tibetans and Chinese spend weeks at a time camping on mountainsides and collecting this rare and valuable fungus. Most of it is exported to China, where it is known by the direct translation into Chinese of 'winter worm, summer grass' *dong-chong xiacao*, after passing through markets in Chengdu and Lhasa.

While *yartsa gunbu* generates significant income, the collectors receive varying income in exchange. Although one estimate published in the official media claimed that only 10% of the collectors receive any direct benefit,⁵ independent scholar Daniel Winkler, an expert on the fungus, told ICT that the value of *Cordyceps* for the collector is likely to be far higher. This is backed up by the first person accounts presented below. Winkler estimates that 40% of the cash income of rural Tibetans came from *yartsa gunbu* collection and that in good production areas such as Nagchu (Chinese: Naqu) in the Tibet Autonomous Region (TAR) the figure is likely to be double this estimate. In 2004, for instance, collected *Cordyceps* represented 8.5% of TAR GDP, higher than mining or industry, according to Winkler.⁶

A May 2007 Xinhua article reported that while in 2001 a kilogram of *yartsa gunbu* cost approximately 16,000 *yuan* (US \$2164), by 2007 the price had skyrocketed to between 80,000 and 100,000 *yuan* (US \$10,821 — US \$13,526) per kg. In the 1960s a kg of *yartsa gunbu* could be traded for a few packets of cheap cigarettes;⁷ by 1980 it had reached 200 *yuan* (US \$27). Another article claimed that by 2007 a kg of high quality *yartsa gunbu* was worth as much as 280,000 *yuan* (US \$37,873),⁸ considerably more valuable than gold.⁹ (This only applies to the top-end of the *Cordyceps* market — it is still possible to buy less high quality *Cordyceps* for much less). One *yartsa gunbu* trader attributed the high prices to speculative stockpiling.¹⁰

Daniel Winkler says: “Nomadic Tibetans have traded caterpillar fungus with neighboring Chinese regions for centuries. But locals say that booming domestic and international demand has made the annual hunt more intense, and enriched a class of Tibetan brokers.” Winkler adds that during the season for collection, “Children get special school holidays to go picking, officials leave their workplaces, and in some areas influxes of thousands of temporary pickers take much of the crop after paying high permit fees, sparking violence with locals and even killings, according to Chinese news reports.”¹¹

According to the Tibetan Centre for Human Rights and Democracy, on June 27, 2007, a group of Chinese Muslims clashed with a group of Tibetan youths in Nagchu — an area divided between the Tibetan regions of U-Tsang and Kham — leading to the arrest of approximately 30 Tibetans. A fight between the two groups broke out over the trading of *yartsa gunbu*, and it was alleged that two Tibetans were tied up and beaten. A protest over the treatment of the two Tibetans subsided only after a high-ranking lama from a nearby monastery intervened.¹²

A Tibetan farmer from Kham in eastern Tibet told ICT: “We have a special place, a

mountain, where we can dig for caterpillar fungus in my locality. And people from other *shang* [townships] are not allowed to enter our place and if anyone from other *shang* or places comes, then they will get beaten up by the local people — the government doesn't even interfere. The standard of living for people in our place is not that bad these days because of the caterpillar fungus. Caterpillar fungus is enormously expensive these days and most of the people would like to do business with it, especially when it is in season. There are so many Tibetan caterpillar fungus businessmen but most of the businessmen are Chinese, Chinese Muslims. I heard that people use the caterpillar fungus for medicine and it is also said that if you put it among your clothes it can protect your clothes against being eaten by insects. Richer people soak it in wine and drink it, and then it can cure diseases. But in our place, people don't use it at all themselves, we just sell it.”

The sustainability of the trade

A survey by Chinese researchers carried out in 18 counties of the TAR, Qinghai, Sichuan, Gansu and Yunnan in summer 2007 found that in the TAR and Qinghai, the current amount of *yartsa gunbu* had decreased dramatically from the quantity found 25 years ago. One of the scientists involved in the survey, Yang Darong, said: “Currently, even though it's not the growing season for *yartsa gunbu*, if collectors see it they pick it, even if it's still at the stage of rotting caterpillar, and leave only the stalk. This makes it extremely difficult for *yartsa gunbu* to propagate the following year.”¹³ Daniel Winkler said that the research did not take into account that there was only a fraction of the numbers of people collecting the fungus years ago, so accounts of its proliferation 25 years ago might not represent the reality on the ground.

A young Tibetan woman from Dechen County (Chinese: Deqing) in Dechen Tibetan Autonomous Prefecture (Chinese: Diqing TAP) in Yunnan Province (in southern Kham) remembered that when she had been a teenager she and her family would go from July to October every year into the mountains to collect fungus: “We would dig deep into the ground to find hundreds of the small brown acrid-smelling fungi.¹⁴ When I was a child, the people in our village could collect nearly 10 kg of them a day, and sell them in the night market for between 30 *yuan* [US \$4.05] and 180 *yuan* [US \$24.34] per kg, depending on how late it was in the season. In one season, a family could earn up to 3000 *yuan* [US \$406], enough to sustain them for years. But over time, the hunt for these valuable mushrooms stripped the forest floor, and left huge gashes in the earth where nothing grew. This year, although it was near the end of the season, we had only earned 500 *yuan* [US \$68] from our mushroom trade.”¹⁵

PERSPECTIVES: A FARMER'S ACCOUNT

A Tibetan farmer from the TAR who is now living in exile told ICT about *yartsa gunbu*-picking in the area where he used to live.

“We have to get permission to collect fungus once a year, and it is a dangerous business as there are so many different people with different attitudes and mental temperaments. It is only safe to go with trusted friends, since a few people were killed and their fungus stolen. Stabbings are almost a sure occurrence at fights these days.

People have been picking fungus for a long time now. Supposedly picking fungus will lead to an increase in the number of fungus the following year. Some would put a single grain into the hole that is left after the fungus is pulled out.

Chinese [Hui] Muslims constitute the highest number of pickers — as they buy lots of permits and come in the hundreds. In some areas, about 500 Muslims would come and their sheer number would intimidate rivals. These Muslims can be very aggressive and in Kongpo Gyamda [Chinese: *Gongbu Jiangda*] in Nagchu they outnumber the Tibetans, so in the market Tibetans are coerced into buying from their shops.

People sell fungus to Khampas [Tibetans from Kham] at the market in Lhasa. They in turn sell them to the buyers in big cities in China. Families keep one or two fungi for treating illness ranging from stomach, kidney, and liver. These are the richer bunch in our town, as the rest would only sell to garner extra money.”

PERSPECTIVES: THE TRADE IN YARTSA GUNBU — ‘IT’S RAINING WITH MONEY!’

The following account of local Tibetans' involvement in the trade in Golok Tibetan Autonomous Prefecture (Chinese: *Guoluo TAP*) in Qinghai Province (part of the Tibetan area of Amdo) was provided to ICT by a scholar who has traveled in the region and who wishes to remain anonymous. Names in the account have been changed. The source provides details of ‘*yartsa* trading fever’ and the concerns regarding its continuation.

“Tenzin together with his brother and sister came to Golok from the part of the Tibetan-inhabited world that today belongs to the Chinese province of Sichuan. It’s mild weather there, beautiful landscape, barley fields and warm log-houses are famous among Tibetans who are unlucky to live in areas with a harsher climate. But

Golok gives them a reason to leave the comforts of early spring in Sichuan and to brave the rough mountain roads which lead to a land where even in May herds of yaks still wake up covered with night snow. For in this month in Golok the season for collecting *yartsa gunbu* starts.

What Tibetans call *yartsa gunbu* is the strange result of a parasitic fungus (*Cordyceps sinensis*) infesting a caterpillar of a *Thitarodes* (*Hepialus*) moth that lives in the soil. The Tibetan name *yartsa gunbu* reflects the origin of this extraordinary organism. A caterpillar is infected by spores of a parasitic fungus that enters its body through the mouth or respiratory pores. The fungus takes over the caterpillar's body and eats it up from the inside — the mycelium slowly fills up the whole exoskeleton of the former caterpillar. To complete the reproductive cycle, the head of the dead caterpillar produces a fruiting body, the *Cordyceps*, designated by Tibetans as a “grass”. For centuries caterpillar fungus has been used in traditional Chinese medicine as a component of many multi-purpose medicines, and the alpine meadows of Golok are one of the three areas of the Tibetan plateau known for particularly good *yartsa*. A combination of high altitude and the high humidity is a distant echo of south Asian monsoons, which get here through the river valleys and create conditions favorable for *yartsa* growth.

The quantity of *yartsa* in a given season depends on rain and snowfall — too heavy snowfall during winter and spring makes *yartsa* rotten and causes losses in the harvest. The season for *yartsa*-gathering starts in the beginning of May and lasts till the middle of June, when growing grass and mountain flowers cover everything and then gatherers have no other choice than to wait for the next season. But up to that moment every rain in the area is welcomed by gatherers and traders with screams of joy: “*gormo bab gi!*” — it's raining with money!

As the season for harvesting *yartsa* approaches a fever breaks out in the area — some schools schedule nearly a month-long holiday to let the students help their families in harvesting. Even distant relatives that have quit the life of a yak- and sheep-herder in hope of making a musical career in Xining, the provincial capital, come back home. Women with small children quickly look for (male or female) babysitters — the usual rate is 3000 *yuan* [US \$406] per month for taking daily care of the baby and the household. Not only relatives and not only Tibetans would like to take part in the ‘gold rush’. However, this year [2006] local authorities introduced a regulation banning entry to Golok to all people from elsewhere, as well as their relatives. A traveler to Golok will meet many checkpoints on the roads — a barrier, a few tents temporarily housing the policemen on guard — and on the dusty road a queue of waiting Toyota Landcruisers packed with passengers, nomads on motorcycles

and groups of people sitting at the road-side and waiting for somebody to lift the barrier closing the way to the pasturelands still covered with last year's dry grass.

In this season Golok nomads stay in their winter houses and only in July will they move to their summer settlements with black spider-like tents woven of yak hair. But during the day their winter settlements are almost empty. Having drunk a few bowls of butter tea with cheese and *tsampa* everybody who can sets off for the mountains. Through the ice-covered river and between herds of yaks that at this time of year already have calves bravely marching to the grasslands, one needs to reach high mountain slopes. That is where *yartsa* grows. *Yartsa* gatherers' work is not easy — as close as possible to the ground, on the knees or crawling, one has to patiently look for a tiny brownish 'head' of the fungus sticking out of the ground. It is as brown as everything that is found in the mountains before the real spring starts and before grass starts growing. An 11-hour working day in high mountains where sometimes the sun burns and sometimes the wind blows hats off heads, ends in the evening with counting the number of plucked pieces of *yartsa*. A cheerful 17-year old girl Tsering, always wearing a fancy pink hat, has found 22 pieces of *yartsa*. Her mother got a better result — she collected over 40 pieces of fungus. Cleaned of the earth with a toothbrush and dried on the stove, the *yartsa* will wait for somebody who will take them to the town for sale. People say that this year for quite a big piece of *yartsa*, traders will pay some 20 *yuan* [US \$2.70].

In the multiethnic cultural context of China, the *yartsa* trade brings together three of the big ethnic groups within the modern day borders of China. In little Dawu you can always see Tibetans speeding on motorcycles through the dusty streets of the town, Hui Muslims in white caps (their wives and daughters in black mantillas), Han Chinese — local administrators and those small-businessmen that came here, to the Chinese Wild West, to try their luck in earning a few *yuan* at the market where competition hardly exists. Han Chinese are the least 'native' — some people wonder if there is any Chinese burial place. The urban legend goes that every Han Chinese goes back to his home province, perhaps Hunan, Shanxi, or Sichuan, to die there.

Tibetans are the first link that opens a flow of *yartsa* from Tibet via mainland China to the outside world. During the afternoon or in the evening in every town or village in Golok there are small groups of people sitting on the pavements with a bag, backpack or a suitcase. There, tightly packed in plastic bags that once contained noodle soup there is *yartsa*, brought straight from the mountains. Calculator and scales help in discussing *yartsa*'s quality. In the folds of the overlong sleeves of Tibetan robes prices are being voicelessly negotiated in the language of gestures. For many nomads it is also a rare opportunity to take a break in town, so discussions last long

and nobody is in a hurry to get back home. Among the middlemen buying the harvests there are Tibetans, Han Chinese and Hui Muslims. Under the main branch of the Agricultural Bank of China there is a crowd of Muslim traders buying *yartsa* from nomads and gatherers 24 hours a day, seven days a week. In the eyes of most Tibetans, Muslims are the most powerful traders. In the eyes of most Tibetans Muslims are the most powerful traders. Although they are otherwise held in low esteem — the town's government didn't approve a recent plan to build a mosque here — the laws of the market prevail over prejudice. 'I sell to the one that pays me more,' Tseten, one of the Tibetan little wholesalers, says. But his competitor adds to the story: 'It would be good if the Chinese big bosses came directly to us, because Huis paint the *yartsa* yellow so that it has a better color and insert pins in them so that the *yartsa* gains weight — these are not honest tricks'.

Tsering is a tall man of 44 years with pale brown eyes which he hides behind gold framed sunglasses. Heavy gold jewelry mingles with huge coral necklaces around his neck. His home county is Jigdril, in a distant corner of Golok. After de-collectivization — which started in Tibet at the beginning of the 80s — Tsering's parents were assigned a number of animals that were supposed to represent what they had before the transformation of the rural society into a system of communes. However it was improbable that nine children would be able to survive on the government-calculated herds, so Tsering decided to try his luck in business. 'I carried petrol poured into lemonade bottles to the nomads' settlements to exchange it for sheep skins, but then I lost everything buying *pimo* [a kind of herb growing in Golok grasslands, 1000 *yuan*/kg]. I was nearly ruined with only 300 *yuan* in my pocket. For 100 *yuan* I bought a bus ticket to Gabde [Chinese: *Gade* County, in Golok TAP] and the rest I put into my next business. And — again — in the morning I would go to nomads' camps to buy yak hides, while in the evenings I was trading something else, and when I finally forgot how it is to be bankrupt and I got back my lost money, I entered the *yartsa* trade without thinking twice' — he says. Today in the Gabde market you can clearly see that Tsering is somebody of importance. If he only knew how to read and write Chinese better he would no doubt go to mainland China to start his business career there. But he still has very concrete plans for his future in Gabde. Asked what his next step in business will be, he says immediately: 'Antique shop.'

The *yartsa* trade gives a chance to nearly everybody with modest capital to invest and a nose for business. It gives you a chance to change your life if the previous one wasn't satisfactory. Tsering's friend and neighbor Rinchen, wearing a North Face brand sports jacket and suit trousers, sits on a small Tibetan carpet spread on the stairs to the motorcycle repair shop. His narrow eyes quickly count the numbers of *yartsa* brought by gatherers. Only six years ago his family still lived a real nomad's

life in Koche Valley. But Rinchen decided to sell all their 80 yaks and move to the town to look for a better future. When he saves some money, he always puts aside a few *yuan* for an offering to one of the local Buddhist temples which have mushroomed in the last decade in Golok. He believes this helps, for sure, to increase one's luck in business. Tseten, a former monk at Ragya Monastery, had similar hopes when he disrobed and came back to society six years ago. For an ex-monk, a man in his thirties, having no job, no land and no animals, the *yartsa* trade was the only way to start a new life. So he borrowed 3000 *yuan* at 5% and for the first time in his life bought *yartsa* to sell later at a profit. Today he is one of 20 Tibetan middlemen who operate in his town. Although the bulky contents of the money belt that he carries under his sheep-fleeced robe suggests that its owner is a mobile bank, Tseten complains that compared to other wholesalers he owns nothing. He hasn't built a new house but — yes, it's true — he bought a new motorcycle to ride to distant mountain valleys and buy *yartsa* at its source. It's a risky business — he says: 'I lost my money not once but twice as the prices can change several times between morning and evening.' His poor knowledge of Chinese worried him a bit but he found a Hui Muslim named Xiao Ma who agreed to go into business with him, and Xiao Ma makes sure that the Chinese documents are properly filled in and all tax regulations duly followed. Tseten is mindful of his family's former nomadic life when he comments on the regulations: 'Look, for us traders, it's pretty bad that they banned entry to Golok for gatherers from the outside, as that means less *yartsa* on the market. But for herders it's better — nobody walks through their pastures and destroys the delicate and scanty grass.'

Kalsang's family has 70 yaks and around 150 sheep. This doesn't make them one of the richest herders in Tibet. When Kalsang was a little girl she lived with her whole family in a sod house in the upper part of the valley. Later, thanks to savings from the *yartsa* trade, they managed to hire Chinese builders that built for them a three-room green dragon tiled house with a portrait of the late Panchen Rinpoche above the kitchen door. And in the guestroom the family's guests are welcomed by a poster of Chairman Mao wearing his well-known grey suit with a tropical paradise-like garden in the background. In the kitchen there is a stove where one always finds a tea kettle, a huge cozy family bed, a wardrobe made of a series of boxes which can be taken apart and moved on a yak's back, and a TV set. Having plugged it into a portable generator one can watch a romantic Chinese series on Qinghai TV dubbed into the local Amdo dialect, or a young Tibetan singer from Chengdu competing in the Chinese equivalent of *Idol*.

This house, built by one of the hundreds of Chinese construction teams that build, prayer-wheel houses, banks and expressways, represents a big change in the family's

life. The youngest daughter has recently enrolled at a middle school that guarantees her later success in entering one of the colleges in the area. Her family knows that with a good education Kalsang's future is assured, so they paid for an English-language course as well. Without savings from *yartsa*, that would have been impossible. The mathematics is simple: for the price of one middle-sized caterpillar fungus one could buy 10 kg of roasted barley *tsampa* flour, or over 2.5 kg of mutton or yak meat or 1.5 kg of butter. And how did it look before? Tenzin Drolma remembers that when she was a teenager (some 30 years ago), her family used to bring full bags of *yartsa* from their mountains, but there was no big demand for it those days. 'It started sometime around 2000,' she says. 'I don't know what the Chinese use *yartsa* for. I heard it's good for cancer and when hair goes grey it helps to restore the color. And when you put it into a *baijiu* [rice liquor] bottle you will get a drink that helps your health — but only in small amounts!' Rumor has it that the recent success of Chinese swimmers in winning gold in the diving contest in May was a result of including *yartsa* in their diet, says Tenzin's husband from in front of the TV screen.

Tenzin, after his attempt to found his business empire by harvesting caterpillar fungus in the mountains, has a new scheme to improve his life. He lurks in the shadows of the local market and earns money playing *sho* — a modern version of the old dice game found among many Central Asian nomads. Paper boards spread on the ground are divided into pictures of various animals (a yak, a horse, a panda etc.) and a pair of big dice. Yesterday, Tenzin brought home 55 *yuan* [US \$7.44]. Players risk losing their money, of course, but that's not the only sense in which the game is a gamble. At every exit from the playing area a lookout stands guard and everyone hopes the police will remember that it's better to stay away from this part of the town. Gambling is illegal, of course.

A *yartsa* trading fever infects everybody. Prices of all goods in the town go up. Suddenly renting a car to Golok gets more expensive — the prefecture isn't a particularly popular region outside the *yartsa* season. *Yartsa* is one of the most common topics at the table or behind the wheel. Tenzin's uncle, who runs a Tibetan carpet manufacturing company in India, will visit China soon. Maybe he'll be interested in starting a *yartsa* business as well. His nephew sent him an e-mail: 'If you're going to buy, buy now as it's fresh and of best quality.' Tashi, Tseten's brother, also a monk at Ragma Monastery, admits that he dreamt of many many *yartsa*. Although he gives no importance to dreams at all, he is worried by the ever-growing scale of the trade. It is a bad omen for the Golok grasslands and the *yartsa* itself. Extinction may happen soon, he says. Its over-exploitation is one of the reasons why outside collectors have been banned from Golok. But those who are lucky enough to own land in Golok, or who managed to avoid the checkpoints, are still collecting *yartsa*."

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- ¹ Skepticism about its efficacy has often been expressed. Jia Shouning, director of the Qinghai Province Chinese Medicinal Plant Research Institute, was quoted as saying that while it is good for treating lung and kidney conditions, it is not regarded in Chinese medicine as being particularly efficacious. 'From Winter Worm Summer Grass to Pu'er tea — what myths are stoking astronomical prices' [从虫草到普洱茶 谁炮制天价神话], *Fortnightly Discussion* [半月谈], December 11, 2007, available (in Chinese) at: <http://info.biz.hc360.com>.
- ² One researcher who has spent a long time on the plateau told ICT that Tibetan exclusion of Chinese collectors has been quite successful in many counties in Yushu and Golok TAPs in Qinghai Province.
- ³ Source as endnote 1.
- ⁴ A group of botanists at the Chinese Academy of Sciences say *yartsa gunbu* may soon disappear in parts of southern Kham (in modern-day Sichuan and Yunnan Provinces), although some independent scholars with experience on the ground believe these reports are not convincing, saying the estimates were too high to begin with. 'Chinese Academy of Science's survey: *Yartsa gunbu* soon exterminated' [中科院实地考察: 冬虫夏草快灭绝了], *Xinhua*, August 7, 2007, available (in Chinese) at: www.chinatibetnews.com.
- ⁵ 'The joys and worries behind sky-high prices for *Yartsa Gunbu*' [“天价虫草”背后的喜和忧], *Xinhua*, May 28, 2007, available (in Chinese) at: www.xz.xinhuanet.com.
- ⁶ Unpublished research by Daniel Winkler, available at www.mushrooming.com. Source as endnote 4.
- ⁷ Source as endnote 5.
- ⁸ Source as endnote 4.
- ⁹ Another article confirmed that the price of a kg of *yartsa gunbu* is over 200,000 yuan (US \$27,497.08), which by weight is more expensive than gold. Source as endnote 4.
- ¹⁰ *Ibid*.
- ¹¹ 'Tibetan Herders Join Rush For Prize Fungus', Reuters, June 13, 2006, archived at Tibet Environmental Watch and available at: www.tew.org.
- ¹² Although in general the Chinese authorities have implemented policies that are aimed at limiting or undermining the influence of local religious leaders, in situations of conflict they still have an important role to play, and their traditional authority is often recognized and accepted at a local level.
- ¹³ The survey was carried out by the Chinese Academy of Sciences. Source as endnote 1.
- ¹⁴ According to *yartsa gunbu* specialist Daniel Winkler, this is likely to be *beshing shamo*, or 'oak mushroom' (pine mushroom in English), which has a strong aroma and is mostly valued by the Japanese. It is a different type of fungus to *yartsa gunbu*.
- ¹⁵ This story is featured in the book 'Heavy Earth, Golden Sky: Tibetan women speak about their lives', C. Michelle Kleisath (ed.), 2007, Shem Women's Group U.S.A., p 62, available to order from www.lulu.com; see also: <http://shemgroup.org>. Shem is a women's group dedicated to empowering Tibetan women and their communities through grassroots development.

PERSPECTIVES

The importance of protecting a 'poetic world'

“Tibet not only has mirror-smooth lakes and kowtowing pilgrims, it has iron-ore smelters rising on the banks of the Yarlu Tsangpo river; it also has young Tibetan children who swear fluently in Chinese.”

CHINESE JOURNALIST ZHUANG LIWEI gave the following account on a Chinese website of the importance of protecting the Tibetan plateau's environment and culture.¹ This is an edited version of the original article. The account reflects the romanticization of Tibet and its landscape by many urban Chinese, as well as a genuine concern for the survival of its culture and environment.

“Over-extravagant lifestyles are not only at odds with the Tibetan people's culture, they also put pressure on the plateau's natural environment: there is over-planting, more grazing of livestock than the grasslands can sustain, and a great deal of consumption of timber materials for construction and industry. In the cold and high-altitude climate it is extremely difficult for damaged plants to recover. The planet is strong, but its surface is weak, and researchers have discovered by means of surveying that excessive ‘trampling by tourists’ can destroy the mulch and topsoil layers, exposing the surface to damage. How is this kind of situation controlled in the Chinese interior? It is either left so that it continues to become exposed and creates sandstorms, or it is simply concreted over and forgotten. But whether it's dust storms or it's concrete, both imply the death of living land. In actual fact, due to the destruction of plant cover, desertified land on the Qinghai-Tibet plateau hasn't stopped growing, and if this trend cannot be rectified then China's central and southern regions are likely to become desertified too.

Large numbers of non-local people flooding in will not only be damaging to the natural environment on the Qinghai-Tibet plateau, they will also be damaging to Tibet's unique cultural environment, and once the latter has been damaged, the loss will be irreversible.

And so how should the plateau regard these swarms of rubber-necking tourists and fortune-hunters from below the mountains?

The influx of such large numbers of people with different cultural backgrounds and different beliefs will erode the original belief systems in the cultural environment of Tibetan areas. When the 'golden weeks' of tourism blast into existence, Lhasa's already heavily secularized streets become even more noisy and raucous. And all of a sudden, in previously hard-to-reach Meldro Gongkar County [Chinese: *Mozhu Gongka*] — which can barely endure the bite of a leech — and in distant Ngari [Chinese: *Ali*], are the unmistakable beauty salons opened by 'people from below the mountains.'

Tibet not only has mirror-smooth lakes and kowtowing pilgrims, it has iron-ore smelters rising on the banks of the Yarlu Tsangpo river; it also has young Tibetan children who swear fluently in Chinese. Will the Tibetan people become immersed in a sense of the temporal world's spiritual emptiness and a sense of boredom and materialism? In many places throughout the world, it is nothing new for the original inhabitants' beliefs to be in decline and facing displacement. And there are many places in China's interior where a 'grey economy' is seen in illegal mining, poaching, plundering timber, gambling and extortion and so on and so forth, which have also appeared in many Tibetan regions.

Lhasa is becoming ever more noisy and raucous, and Tibetan areas are becoming ever more commercialized, secularized and materialistic. This then is the 'crisis', and this then is 'occupation'.

With reverence in one's heart, treasure Tibet

The concept of Tibet has significance for the natural environment and significance for the environment of human culture. 'Coming to Tibet' is not the same as 'Discovering Tibet'. As far as 'people below the mountains' are concerned with regard to Tibet, its value lies in its physical inaccessibility and its independence and removal from the rest of the world. We shouldn't be anxious or hasty to go to Tibet; going to Tibet should be done at an extremely apposite time when there are spiritual requirements to be met and ones' soul is prepared, and not simply going as soon as one has the time and the money. I do not oppose and have no way of stopping everyone going to Tibet, but if you love Tibet you should choose wisely and cherish the opportunity to improve yourself in Tibet, and not just ignorantly stampede into Tibet.

I didn't want to go to Tibet before because I was afraid that as soon as I saw it my impressions and imaginings would be shattered, that it wouldn't be anything like the image of the pure and spiritual image of Tibet I'd constructed and maintained in my

mind. I've heard that many Japanese Francophiles who go to Paris bearing copies of all the French classics succumb to an illness roughly called the 'seeing Paris syndrome', where they go into a kind of trance and start wailing. The illness is because Paris is not as beautiful as they had imagined — actually, McDonald's burgers are on sale in Paris; actually, Japanese electronics are on sale in Paris; and actually, there are trash cans along the streets of Paris. But I'm not mocking this phenomenon. Wang Xiaobo [a famous Chinese writer, 1953–1997] once said that aside from this life, we should also 'have a poetic world'. People who think in such ways are certain to suffer disappointments in life and will suffer bloodied noses along the way, but because of their determination they will also have great joys.

Tibetan people have a poetic and spiritual world, and this of course is worthy of respect and praise.

It is not just Tibet which is under imminent threat in this world, it is also our souls. The worth and magic of Tibet's precious heritage to mankind has been jointly built by Tibet itself and by people who have a reverence and a love of Tibet. However, this Tibet is gradually fading from our peripheral vision and from beneath our feet. It seems controlling the number of tourists as in Bhutan would not be possible, but what we can do is control our attitude towards Tibet, and our actions on Tibet: appreciate it in peace, harmoniously blend in, consume simply, create less waste, respect the Tibetan people's spiritual lives, do more to protect the environment on the plateau, and at the same time mobilize the strengths of the people to supervise the activities of government and commercial power-holders to stop them from damaging in the name of development this holy land on the plateau.

In my eyes, the Tibetan plateau is the largest rock in the world which fills one's entire vision. Its precious value to the soul and to the spirit is buried deep inside the rock, and can only be gained by those with patience, with reverence and with good fortune. A truly beautiful journey to Tibet should be one of cleansing the soul and spiritual conversion; and not one of an occupying stampede.”

¹ 'Please protect the holy land of the Tibetan plateau' [请维护西藏这片高原圣域], Zhuang Liwei [庄礼伟], Nanfang Newspaper Group, June 4, 2007, available at: <http://tibet.cn>.

PERSPECTIVES

'All one can do is pray in the darkness of one's room'

A VISITOR TO TIBET provided ICT with the following account of the changes observed in Lhasa since the opening of the Qinghai-Tibet railway. Rising food prices and rents, an influx of migrant workers, and exclusion from Lhasa's construction boom all add to local Tibetans' feelings of marginalization.

"Lhasa is expanding fast. The new ring-road which links the western part of the town with the Ne'u [Chinese: *Liuwu*] area of the railway station is complete. The construction is impressive, neat, and has a huge lawn surrounding it. Entering the town from the airport along Liberation Avenue, it's impossible to miss the extensive work of construction which has produced a larger road. A large billboard welcomes the tourists, associating the army to the unity of the country through the message: 'The Army loves the People and the People support the Army. The Army and the People are united like one family'.

I met some locals at a tea-house one day and talked to them about the impact of their railway, asking them if it had brought benefits to their lives. One Tibetan replied: 'What benefits? We haven't seen any benefits since they destroyed the village and moved us into the "People's Residences"' [the official term for the Liuwu new area, which was built after demolishing the village of Ne'u and relocating its residents]. They said that benefits may come in the future. They also told me that the Chinese companies only employed other Chinese to work at the station, not Tibetans, although some Tibetans had obtained unskilled manual labor on the construction of roads. The only Tibetan I saw [at the station] was the security official associated with the new Public Security Bureau office.

Food such as local produce has increased in price because more vegetables are now coming from Xining and demand has increased so much, and rents are also more expensive. A Chinese man who owns a local cafe said to me that his bills for food are higher than last year. But the rent he pays to the Tibetan landlord is much higher, and he said: 'It's because everyone wants to get benefits from the new wave of tourists. Landlords know that we bar and restaurant owners now make more money due to the higher influx of Chinese and Western tourists and so they want to share a slice of the cake.'

A Chinese Tibetan Buddhist nun has lived here for many years, but now she has decided to leave Lhasa because life has become impossible for her and her elderly relative, who is also a nun. 'We can't live here anymore. It's too expensive for us. Not only is the rice very expensive, but also vegetables and fruits. I can't afford the rent of anything, even this small and ugly place! I have to leave now, but it's good. I will finally dedicate my life to receive teachings and practice again, something I have neglected for too long. Not only has the price of things increased, but also the number of cars and people. I don't like this. Here, there is no religious life for a religious person. Nobody can receive teachings and the only thing you can do is to pray in the darkness of your own room.'



A poster promoting accelerated modernization in Tibet presents a glossy, romanticized vision of Lhasa's future. The slogan translates as, "Tibet's tomorrow is even more beautiful". The wording at the bottom of the poster reads, "Lhasa Beer, a famous Chinese brand name", and includes the logo of the Carlsberg Group, which owns a stake in Lhasa Beer. The Chinese language dominates on the poster – increasingly, only the Chinese language is used on signage in Lhasa and other urban areas. IMAGE: ICT.

FOREIGN INVESTMENT IN THE RAILROAD AND MINING IN TIBET

THE OPENING OF THE RAILROAD has taken China's plans of economic development in Tibet to a new level. For the first time, major foreign businesses have become involved in investment in Tibet, both in the construction of the railcars themselves, and also in the exploitation of Tibet's mineral reserves, which can now be transported from the plateau more easily.¹

Investment from outside the People's Republic of China (PRC) is regarded by the Chinese authorities as crucial to the success of the Western Development Strategy, and much planning is premised on significant amounts of foreign investment.² According to official figures, total investment (both domestic and foreign) in the Tibet Autonomous Region (TAR) totaled almost as much for the first year of the railroad's operation as it did for the entire period from 2001 to 2005.³ In 2001–2005, investment in the TAR totaled 5.1 billion *yuan* (US \$656 million) whereas in 2006 alone the figure was 4 billion *yuan* (US \$513 million). A report in the magazine *China Investment*, published by the State Reform and Development Commission, stated: "In just the first month of the train running [...] agreements were signed for a total of about 2.4 billion *yuan* [US \$330 million] to be invested in 56 projects".⁴

"With the opening of the railway there are more and more investors from all sectors flooding in, and the potential for growth is enormous," Chinese businessman Zhang Huashan was quoted as saying on a Chinese investment website. He added that the two main areas of dramatic expansion were real estate in cities such as Lhasa and mining, with Tibetan medicine also an up-and-coming prospect.⁵

The US company General Electric built the railroad locomotives, the Canadian company Bombardier made the railcars, and the Canadian communications company Nortel developed the technology to enable communications between trains and railroad control centers.

Fund managers have been snapping up shares in Tibet-based publicly traded companies such as Tibet Mineral Development Co. Foreign mining companies (many registered in Canada) are now involved in controversial projects to exploit gold and copper deposits in the TAR because the new infrastructure will make it possible to ship ores out of an area that was previously remote and inaccessible.



Shethongmon (Chinese: Xietongmen) copper mining project, located 240 km southwest of Lhasa in Shigatse (Chinese: Xigaze), where a Canadian mining company, Continental, is carrying out explorations of the deposits. The image depicts a mobile drilling rig, set up to drill horizontally into the hillside to take a closer look at the deposit. The railroad has been a key factor in the opening up of large-scale exploitation of Tibet's mineral and natural resources, helping to consolidate the involvement of foreign corporations into the Tibetan economy for the first time. The extraction of these resources is one of the primary reasons for the construction of the railroad, linked to maintaining Party control and 'ownership' of Tibetan areas. IMAGE PROVIDED BY A VISITOR TO THE AREA.

In Lhasa, the Danish brewery Carlsberg has helped finance an expansion of the Lhasa brewery to help it export more beer into the Chinese interior. "Of course, Carlsberg's western regions' strategy is not unconnected to the construction and opening of the Qinghai-Tibet railway," said a Chinese investor Rong Jianbu, quoted on a Chinese business web portal. "Furthermore, with the gradual opening up of the south Asia market, a large amount of our beer can be sold abroad."⁶ Carlsberg told ICT that prior to the opening of the railroad, it had not considered the railroad to be "a major factor" in its investment in Tibet. "Of course there was a positive factor in the ability to export Lhasa

Beer elsewhere in the PRC, but we believed there would also be the negative factor of increased competition and prices of beer dropping further,” a Carlsberg spokesperson told ICT.⁷

The Canadian company Rail Partners has stated that the opening of the Golmud-Lhasa railway symbolizes the arrival of the “railway tourism age” in the PRC, and has invested US \$130 million in a joint venture with the Qinghai-Tibet Railway Company under the Ministry of Railways to develop the potential of the luxury travel market opened up by the new route.⁸

The regional TAR government is actively seeking foreign investment with assistance from the central Chinese authorities. In November 2007, for instance, an event sponsored in part by the Chinese State Council was held in Vienna, the Austrian capital, to try and showcase business enterprises in the TAR — Lhasa in particular — to Austrian companies and investors.⁹ Reference was frequently made to the new commercial opportunities in the TAR as a result of the new railroad,¹⁰ while the vice chairman of the TAR government, Nyima Tsering, promised investors that “social stability will be maintained in Tibet.”¹¹ The forum was reportedly the first of several ‘road shows’ on business and investment opportunities in the TAR due to be held throughout Europe in different cities on an annual basis.

The same report in *China Investment* referred to the reasons for optimism about investment in Tibet with the opening of the railway as: “First, there were many more high-level Party and government explorative parties going to investigate Tibet, with more and more looking to find cooperative projects; second, there was an unprecedented number of investors from different types of economic organizations all over the country going to Tibet to consider investment opportunities; third, for the first time senior leaders from large state-owned enterprises could go to Tibet on inspection tours.”¹²

Bombardier’s railcar investment

The distinctive green railcars of the trains along the Golmud-Lhasa route were provided by the Canadian company Bombardier, which announced in February 2005 that a joint venture it had formed had won a contract to supply 361 rail cars for the new train line. Bombardier’s share of the deal was worth US \$78 million. Another Canadian company, Power Corporation, who along with Nortel are in partnership with the Chinese state-owned enterprise Sifang Locomotive, were instrumental in coordinating financing for Bombardier and Nortel’s investments in the railroad.

All of these companies have deflected criticism by saying that they do not get involved in politics, even though, as this report has shown, Beijing has made the political purpose and nature of the railroad explicit. Jiang Zemin, the then president of China, was quoted by the *New York Times* in August 2001 as saying that even though the railroad project would not necessarily be commercially viable, this did not matter much because the construction of the railroad was a “political decision”.¹³

The Chairman and CEO of Bombardier even quoted the Dalai Lama in an effort to justify his company's involvement. Laurent Beaudoin claimed at the company's annual general meeting in June 2005 that the Dalai Lama supported the railroad and other projects because of the development opportunities they brought to Tibet.¹⁴ The Dalai Lama is not opposed to economic development when it improves the well-being of Tibetans, and does not believe there is anything inherently wrong with the construction of infrastructure in Tibet. But the Tibetan religious leader has also said that he is concerned that the railroad will result in “some sort of cultural genocide”.¹⁵

On May 30, 2006, the shareholders of Bombardier were formally invited to reflect on their involvement in the Golmud-Lhasa railroad. A resolution was submitted to Bombardier asking the company to draft and adopt a human rights policy and to arrange for an independent report on its progress towards formulating such a policy. However, Bombardier advised shareholders to reject this resolution, affirming that the company already upholds international principles of human rights. Many large companies including Siemens, Bombardier's European competitor, have already adopted human rights policies.

The Tibetan Government-in-Exile (TGiE) has issued specific recommendations for businesses to follow when they seek to invest and operate in Tibet,¹⁶ including, for example, recommendations for foreign companies to hire Tibetan management, to use the Tibetan language, to offer skills training to Tibetan people in communities where the companies operate, and to urge the preservation of the natural environment and natural resources.

The TGiE's ‘Guidelines For International Development Projects And Sustainable Investment In Tibet’ suggest that foreign investors “make efforts to ensure that their participation in Tibet does not: a) Deplete natural resources with little or no benefit to the Tibetan people; b) Facilitate the erosion of Tibetan culture and traditions; c) Facilitate the migration and settlement of non-Tibetans into Tibet; d) Negatively affect the sustainability of Tibet's ecosystems; e) Transfer ownership of Tibetan land and natural resources to non-Tibetans; f) Operate projects without the participation of affected

Tibetans; g) Facilitate large-scale, capital-intensive, and commercial projects.”

In answer to a question about the number of Tibetan and Chinese workers employed by Bombardier to construct the railcars, given the marginalization of Tibetan workers as a result of increasing competition from Chinese migrants traveling to Tibet on the railway, Bombardier told ICT that its workforce consisted only of “Chinese and foreign employees”. Bombardier added that it currently does not have Tibetan employees at its Chinese joint ventures in the PRC, but that it had recently launched a Tibet professional training program in tourism management, spending approximately US \$1 million to fund 20 poor rural Tibetan students over a three-year period.¹⁷

The Canada-based mining company, Continental Minerals, which is currently carrying out an exploration project near Shigatse (Chinese: Xigaze) in the TAR, told ICT that approximately a third of its staff in Shigatse are Tibetan. “Some of them are undergoing on the job training,” said Dickson Hall, Vice President of Business Development. “The rest of the staff is Chinese and Canadian.”

Nortel, a Canadian communications company which has supplied a digital communications system for the railroad, and GE Electrics based in Pennsylvania, USA, which supplied the locomotives, refused to answer the question about numbers of Tibetan employees and whether training was provided, and other queries posed by ICT.

Nortel: Supplying communications and surveillance technology

Nortel Networks Corporation is a major Canadian communications company which has supplied equipment used on the Chinese railroad network for some years. In 2005, Nortel announced it had been awarded the contract to supply a wireless digital communications system for the Qinghai-Tibet railroad, a system which is crucial to the operation of trains on the line.

Nortel’s Global System for Mobile Communications for Railroads (GSM-R) is the first system of its kind to be used in Asia for enabling communications between trains and railroad control centers. Engineers at a Beijing research institute linked global positioning and other communications systems with Nortel’s GSM-R system to produce “an extremely accurate location-tracking system”, according to its developers.

Aside from concerns about helping China use the railroad to project firepower beyond previous military capabilities — particularly towards India — there are concerns that

Nortel's GSM-R system can and will be used by China's surveillance agencies to enhance their ability to monitor and suppress political dissent in the PRC, including in Tibet.¹⁸

Railroad communications systems in China are already part of the Golden Shield system, an enormous state, regional and local network which aims to build a database on all PRC citizens, and which incorporates voice and face recognition capabilities with other surveillance systems such as monitoring all forms of electronic communications, and electronic identity cards which can be read at a distance without the bearer's knowledge. Under the Golden Shield project the Chinese government employs some 30,000 people just monitor Internet communications in China, as mandated by a raft of laws and regulations aimed at controlling information flows into and out of the PRC. Nortel has also been instrumental in designing many of the systems incorporated into Golden Shield, besides those integrated into China's rail network.¹⁹

Security surveillance systems of course have legitimate uses. However, the PRC uses those systems to monitor and suppress political dissent, often in contravention of its obligations under international human rights law such as the International Covenant on Civil and Political Rights, which the Chinese state signed in 2001 but has yet to ratify. The Chinese state refuses to be held accountable — or even to accept any meaningful responsibility — for well-documented violations of internationally recognized human rights, and it was against this background that strong protests were launched against Nortel when it won the contract to supply the communication systems for the Qinghai-Tibet railroad.

In a human rights impact assessment report on Nortel's involvement in Tibet, the Canadian-based International Center for Human Rights and Democratic Development has said that Nortel has attempted to evade discussions or dialog with exiled Tibetans and Tibet support groups, and that "Despite numerous efforts [...] since 2005 to engage Nortel in this [impact assessment] research, the company has consistently refused to participate." Nortel also declined to answer questions posed by ICT for this report.

The report continues, "The GSM-R technology provided by Nortel for use on the [Golmud]-Lhasa railroad is part of China's surveillance architecture and thereby underpins the capacity of the state to monitor dissent and maintain political control in Tibet. Nortel cannot claim that it lacked prior knowledge of China's human rights record in Tibet because such information is widely available in Canada. In selling advanced communications technology to the state, the company failed to conduct adequate due diligence, even when shareholders requested that it do so. There is no observed effort on the part of Nortel to assess the potential impact of its investment on human rights."²⁰



A road built for mining activities cuts across a hillside in Tibet. The damage caused to Tibet's fragile high plateau landscape by mining is a cause of concern both to Tibetans and increasingly, to many Chinese and Western scholars and policy-makers. IMAGE: ICT.

Other companies including Microsoft, Cisco Systems, Yahoo! and Google have also been accused of abetting the Chinese state censors and helping suppress freedom of expression in China. Yahoo! in particular were on the receiving end of some unusually stern criticism from the US Congressional Human Rights Caucus in November 2007 when news emerged that the company had supplied information which enabled the Chinese police to identify and eventually imprison several writers for up to 10 years on political charges. At an earlier hearing in 2006, representatives of Yahoo! had denied they knew China's request for information on two of the writers related to political charges, and that Yahoo! therefore had no culpability in their imprisonment.

At the November 2007 hearing, after it emerged that Yahoo! had in fact known that the writers were facing political charges based solely on written opinions traced to

their Yahoo! accounts, Jerry Yang, the Chief Executive Officer of Yahoo! was urged to publicly apologize to the mother of one of the writers, Shi Tao, as she sat behind him at the hearing. Senator Tom Lantos, who was chairing the hearing, said that Yahoo! were “moral pygmies” for their part in the writers’ imprisonment.²¹

Mining companies’ involvement in Tibet

“As companies seek to be guided by more socially and environmentally responsible values, we need to ask what corporate responsibility means. This is an especially challenging question for the increasing number of foreign companies working in or looking at working in Chinese-ruled Tibet. This commercial and corporate interest comes at a time in Tibet’s history when ordinary Tibetans have no real say in their country’s development. Tibetans should be participating, directing and benefiting from this development especially when it concerns the exploitation of Tibet’s non-renewable resources such as gold. Therefore, I appeal to all foreign mining companies, and their shareholders, who are thinking about working in Tibet to consider carefully about the ethical values when embarking on such a venture.”²²

— His Holiness the Dalai Lama, 2003

Foreign mining companies have been able to invest in operations in Tibet thanks to an ‘agglomeration’ of the mining industry in Tibet, whereby smaller Chinese companies were subsumed by larger companies under the direction of the central government. Those larger companies raise capital to expand their investments by floating a portion of their ownership on stock markets around the world.²³

However, due to the as-yet underdeveloped state of regulation on foreign investment in the PRC, investments — whether by foreign or domestic investors — are by no means secure; and the process is rarely transparent beyond common standards of commercial confidentiality. In 2005, the Australian venture capital company Orchid sought to invest in two potentially huge copper deposits in Kham, in the area bordering the TAR and western Sichuan Province, on the contracted understanding that Orchid was the sole bidder in partnership with the government of the TAR. Orchid then discovered that the TAR government was also in negotiations with a local bidder, and felt compelled to withdraw from the arrangement in the belief that that the local bidder would be preferred.²⁴

Chinese officials have always known that the railroad would increase the likelihood of foreign investment in the exploitation of minerals in Tibet. An article in the Chinese

press highlighted the ‘opening of the floodgates’ that they predicted would happen after the opening of the railroad: “Because of a lack of funds and transportation, few of Tibet’s mineral deposits have so far been explored. In Tibet, less than 1% of discovered mines have been prospected, only 15% of mines under commercial operation have completed reconnoiter works, and only 10% of mining companies have passed resources assessment by local authority,” reported InterFax China in an article published on July 28, 2007, soon after the opening of the railroad. “But this was all before the railroad came to town. Production output could surpass RMB 10 billion [US \$1.25 billion] and account for one-third of the province’s GDP within five to 10 years, according to the Xinhua news agency,” reported InterFax.²⁵

PERSPECTIVES: A TIBETAN NUN’S VIEW OF WESTERN INVESTORS

During its mission to Tibet, the International Center for Human Rights and Democratic Development asked an elderly nun about her views on the benefits of western investment in Tibet: “She said that westerners accompany their investment with good public relations. Many, she said, have knowledge of Tibetan language or Chinese language. They promise that their particular project will bring development to Tibet and to the Tibetan people. Once the project becomes operational, however, it benefits the westerners themselves and their Chinese counterparts. Tibetans remain marginalized and used in glossy publicity photos for the project. What Tibetans actually need, according to the nun, is improved access to health care, Tibetan language education, and freedom of religion. Western investment never extends to these areas, she said.”²⁶

Another Tibetan source, a young man from Amdo who is now in exile, told ICT: “Sleek publicity and concepts such as corporate social responsibility are used to counter and prevent criticisms leveled at Western investors both by locals as well as by overseas Tibetans and Tibetan supporters.”

The majority of foreign companies so far known to have invested in mining operations in Tibet by buying into Chinese operations are registered in Canada — although British and at least one Australian company are also known to have invested in Tibet by partnering with Chinese companies. The Canadian company Continental Mining, for instance, which has a significant stake in developing a large copper, gold and silver mine in Shetongmon County (Chinese: Xietongmen) in Shigatse Prefecture (Chinese: Xigaze) in the southern TAR, entered a partnership agreement with the Chinese com-

pany Jinchuan Group Ltd in February 2007.²⁷

The head of Continental Minerals, Gerald Panneton, told a Canadian mining magazine that the new rail link to be built to Shigatse would greatly reduce transport costs, saying: "What makes this project economic is that [...] they [the Chinese] built a railroad between the town of Golmud and Lhasa, and it is to be extended all the way towards the project. What this does, because of the existing rail system that you have in China, is give you access to all the smelters."²⁸ The link is slated for completion in 2010, and could transport ore to copper processing plants in the Chinese interior.²⁹ According to one authoritative estimate, Continental Minerals could make as much as US \$10 billion from the Shetongmon mine over the mine's lifetime.³⁰

Others make the same point. "In the past, transporting one ton of ore from Tibet to Golmud cost almost as much as the ore itself, and could cost even more; the opening of the railway heralds a 'spring' coming and this spring heralds yet more investors," enthused a web portal of a global strategic consultancy in an article entitled 'Go to Tibet'.³¹

China now hopes that Shetongmon will be a model for future mining projects in the TAR, thus encouraging more foreign investment. Already it has offered substantial incentives to Continental, including the agreement to pay for, and build, the railroad lines between Shetongmon and the nearest smelter in Gansu Province, as well as providing hydropower to the copper concentrator. The Chinese authorities say they will also accept just half the advertised freight rate for the copper concentrate which Continental will send to the smelter, and will exempt Continental from paying any kind of tax to Beijing during its more profitable early years of operation.³²

Continental Minerals has now bought more land in the area and is drilling to see how much copper is available. It has also announced that a social and environmental impact assessment is almost complete, which it told ICT will be made publicly available. Any agreement made at Shetongmon will establish a precedent for the involvement of foreign companies mining in Tibetan areas.

In an interview with ICT, a spokesperson for Continental Minerals down-played their involvement, saying that so far only drilling holes "the size of a beer-can" had been carried out.³³ But it is notable that in trade publications such as the *Northern Miner*, representatives from the company speak about the significant size of the project and how close it is to completion. Images obtained from the mining site by ICT depict a mobile drilling rig that has been set up to drill horizontally into the hillside, in order

to take a close look at the deposit.

The Shetongmon project has been criticized by the Tibetan Government in Exile (TGiE) for being on a scale that is too large to benefit local Tibetans. In a statement, the Environment and Development Desk of the TGiE, based in Dharamsala, India, said: “[The Shetongmon mine will] deplete precious Tibetan resources for the profit of distant Chinese state-owned partners and a Canadian company, with only modest royalties provided at provincial level and inadequate compensation locally. [The mine] impacts negatively on an area close to one of Tibet’s most historic towns, namely Shigatse. The large number of mines in Tibet, on a much smaller scale [than Shetongmon], invariably caused destruction, and provided opportunities for an uncontrolled influx of Chinese immigrant workers into Tibet.”³⁴

The Canada-based International Center for Human Rights and Democratic Development observed ‘indicators of discrimination’ at the Continental Minerals’ site at Shetongmon during an unofficial fact-finding visit to the plateau in 2006. Their report stated: “At the time of our mission, the mining operation consisted of 10 drilling rigs, with tents for workers and operations. [...] Interviews we conducted in Shetongmon revealed the local communities had not been consulted and had almost no idea of what all the activity was about.”³⁵ In June, 2006, apparently unhappy about the lack of consultation, some local Tibetans reportedly confronted workers at one of the company’s drilling operations. A spokesperson for Continental Minerals acknowledged that there had been an issue where local people were unhappy about the drilling operations but that this had been resolved to all parties’ satisfaction within a day.³⁶

Reports from the area received by ICT confirm that since then, local people have been compensated for any adverse impact of the project’s activities, and that local people have been promised first priority for employment at the mine. A Continental Minerals spokesperson told ICT that if mining did go ahead at Shetongmen following the exploration phase, 10 households would need to be relocated, and that there had been full consultation in the local area about this, including discussion of a compensation package. Continental Minerals also said that attempts were made to hire, and train, Tibetans wherever possible, and that “approximately a third” of staff in the Shigatse administration office of the project were Tibetan. They did not preclude sending Tibetans overseas to train for specialist roles in a future mine project.³⁷

A Tibetan source who asked to remain anonymous told ICT: “While so far there are little practical benefits for local people, there are promises that this will happen. The question is, what are the sustainable benefits for local people?”³⁸ A second Tibetan

source familiar with the area and the mining project told ICT: “The compensation package given to the locals is a pittance when one considers the huge wages earned by mostly Chinese staff and their generously subsidized lifestyle. At the mining site, local Tibetans are informed about mining/exploration activities, but of course they don't have a say in the overall decision-making.”

Another Canadian mining company involved in Tibet is Inter-Citic Minerals, which describes itself as “a gold exploration company focused on China” and which signed an agreement in 2006 to continue mining a site in a traditionally Tibetan area of Qinghai Province until December 26, 2033.³⁹ The Dachang mine, in Chumarleb County (Chinese: Qumalai), Jyekundo Tibetan Autonomous Prefecture (Chinese: Yushu TAP) is jointly run by Inter-Citic with a holding of 87%, and the state-owned Qinghai Geological Survey Institute, which owns the remaining 13%.⁴⁰

Another Canadian company, Dynasty Gold, has a 70% stake in prospecting a large swath of land in the far northwest of Tibet, with Qinghai Geological Survey Institute — the Chinese company in partnership with Inter-Citic — holding the remaining 30%.⁴¹

This ownership structure is replicated with varying proportions of domestic-foreign ownership throughout Tibet, offering an apparent ‘win-win situation’ for those Chinese companies which lack capital, technical expertise and equipment (Inter-Citic uses American-made diamond drill-heads at Dachang, for example), and for foreign companies which can expect to see considerable returns on their investments.

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- ¹ Foreign companies are also investing more readily in Tibet's tourism sector now that the railroad has opened. See 'Tourism, the railroad, and Tibetan cultural identity', p. 75.
- ² 'The Campaign to "Open Up the West": National, Provincial-level and Local Perspectives', David S.G. Goodman, *China Quarterly*, Volume 178, June 2004, pp 317–334, available (to subscribers) via: <http://journals.cambridge.org>.
- ³ From 2001–2005, investment in the TAR totaled 5.1 billion *yuan* (US \$656 million) whereas in 2006 alone the figure was 4 billion *yuan* (about US \$513 million). See: 'Figures Related to the Qinghai-Tibet Railway on its One Year Inauguration Anniversary', Xinhua, July 1, 2007, available at: www.tibet.cn.
- ⁴ Source as endnote 4.
- ⁵ 'IT Managers' World cover story: Go to Tibet [IT经理世界封面报道: 到西藏去]', *IT Managers' World*, August 14, 2007, available (in Chinese) at: <http://it.licxo.com>. This site is an internet portal for the international Chinese business community hosted by the World Executive Group, a global strategic consultancy.
- ⁶ *Ibid.* The same article added that Carlsberg is building a 'western regions beer kingdom'. It has bought Huashi Beer in Kunming, the Yunnan Dali Beer (Corp) Co Ltd and has established as a joint venture Lhasa Beer Co Ltd. Mineral water companies, too, are benefiting from the railway; the article added that on August 9, 2007, 400 cases of 5100 mineral water, from the glaciers of Damshung (Chinese: Dangxiang), was shipped to Beijing on the train.
- ⁷ Phone interview with Soren Hansen, Business Development Director, January 23, 2008. Mr. Hansen also said that he had heard that because the cargo capacity on the train is limited, the rail link from Lhasa had not been used yet to transport beer.
- ⁸ 'Now that the train has entered Tibet' [火车进藏之后], *China Investment* [中国投资] Issue 2, 2007, pp. 50–54, February 2007, available (in Chinese) at: www.chinainvestment.com.cn.
- ⁹ 'Tibet in focus as Vienna catches China craze', Xinhua, November 30, 2007, available at: <http://en.tibet.cn>.
- ¹⁰ 'Insight: Good tidings from Vienna for Roof of the World', *China Daily*, December 3, 2007, available at: www.chinadaily.com.cn.
- ¹¹ 'China's new Tibet policy matter of concern for India', *Times of India*, November 30, 2007, available at: <http://timesofindia.indiatimes.com>.
- ¹² Source as endnote 4.
- ¹³ 'In Jiang's Words: "I Hope the Western World Can Understand China Better"', August 9, 2001, *New York Times*, available at: www.nytimes.com.
- ¹⁴ 'Tibet train draws flak: Hot Bombardier shareholders meeting', June 8, 2005, *The Montreal Gazette*, available at: www.montrealgazette.com. Bombardier is a signatory to the International Association of Public Transport Charter on Sustainable Development, which states that sustainable development projects should include "social well-being and equity for both employees and communities within the sphere of activity." Investment in the railroad project has been described by critics as being at odds with this promise. ICT takes the position that it supports investment in Tibet if it is responsible and can be proven to benefit Tibetans.
- ¹⁵ 'Dalai Lama: Rail Link "Cultural Genocide"', September 12, 2005, Associated Press, available at: www.washingtonpost.com.
- ¹⁶ 'Guidelines for International Development Projects and Sustainable Development in Tibet', Tibetan Government in Exile, available at: www.tibet.net.
- ¹⁷ The railcars were built in the eastern coastal city of Qingdao, Shandong province, in one of Bombardier's al-

ready established joint ventures — Bombardier Sifang Power (BSP). Testing on the rail line to Lhasa was also conducted by Chinese and foreign engineering experts. Email response to questions, January 23, 2008.

- ¹⁸ For a fuller discussion of Nortel's involvement in the Qinghai-Tibet railroad and its impact upon human rights in Tibet, see: 'Tracking Dissent on the High Plateau: Communications technology on the Gormo-Lhasa Railway', in 'Human Rights Impact Assessments for Foreign Investment Projects', International Centre for Human Rights and Democratic Development, May 2007, available at www.dd-rd.ca.
- ¹⁹ 'China's Golden Shield: Corporations and the Development of Surveillance Technology in the People's Republic of China', Greg Walton, International Centre for Human Rights and Democratic Development, 2001, available at: www.ichrdd.ca.
- ²⁰ Source as endnote 18.
- ²¹ 'Disappointing testimony to US congressional hearing by Yahoo! executives', November 7, 2007, Reporters Sans Frontieres, available at: www.rsf.org.
- ²² See: 'Who owns Tibet's gold? Sino Mining: an Australian company in Tibet', Australia Tibet Council, Sydney, available at: www.atc.org.
- ²³ 'Tibet: a human development and environment report', December 2007, Department of Information and International Affairs, Central Tibetan Administration, Dharamsala, p. 175.
- ²⁴ 'Orchid Capital Update', August 31, 2005, available at: www.orchidcapital.net.
- ²⁵ 'Tibet Railway Opens the Gates for Mining', InterFax China, July 28, 2006, archived by *Resource Investor*, available at: www.resourceinvestor.com.
- ²⁶ This opinion was also expressed directly to the Government of Canada during a meeting with Tibetan community representatives held in Lhasa in 2002, according to the same report, 'Tracking Dissent on the High Plateau: Communications technology on the Gormo-Lhasa Railway', in *Human Rights Impact Assessments for Foreign Investment Projects*, International Centre for Human Rights and Democratic Development, May 2007, available at www.dd-rd.ca.
- ²⁷ See the website of Continental Mining's parent company Hunter Dickinson for further details, available at: www.hdgold.com. Shetongmen is currently going through the 'mine-permitting' phase, according to an article in *Northern Miner* on December 17, 2007. In a press released published by *Market News* on January 10, 2008, President and CEO of Continental Mining, Gerald Panneton, said: "Excellent progress continues to be made toward our mining license application and completion of the technical, environmental and social studies for Xietongmen. Our goal is to fulfill all requirements for a mining license, design and build an operation that meets international standards, and contributes positively to the economic development of the region. With our major shareholder, the Jinchuan Group (which recently increased its position in KMK to 14% through exercising warrants (C\$2.25) at a premium of 36% to the current market), we look forward to developing this excellent project."
- ²⁸ 'High On Tibet: Continental Minerals expects Xietongmen feasibility in mid-2007', Stephen Stakiw, *Northern Miner*, Canada, March 5, 2007. Once loaded onto rail freight wagons, the nearest copper smelter is the Jinchuan Nonferrous Metals Corporation in Gansu Province.
- ²⁹ Another senior official at Continental's headquarters in Vancouver, Canada, confirmed in an interview with ICT that the extension to Shigatse would be of benefit to the company, although it was still unclear where exactly the railhead would be. (Dickson Hall, Vice President, Business Development, Continental, phone interview, January 22, 2008).
- ³⁰ Source as endnote 22, p. 173. According to *Northern Miner* (December 17, 2007), capital costs are estimated at US \$476.2 million with payback projected in 5.2 years. Shetongmen is anticipated to have a 16.5% internal rate of return and a US \$231.7 million net present value, based on a 7.5% discount rate. Operations are likely to have a production rate of 40,000 tonnes per day (annual throughput of 13.2 million tonnes) for

116 million lbs (52,600 tonnes) of copper, 190,000 oz. of gold and 1.73 million oz. of silver annually over a 14-year mine life. See also 'Positive feasibility study for Continental's wholly-owned Xietongmen project', Continental Mining press release, August 15, 2007, available at: www.hgold.com.

³¹ Source as endnote 2.

³² *Ibid*.

³³ Source as endnote 29.

³⁴ *Ibid*.

³⁵ Source as endnote 18.

³⁶ Source as endnote 28.

³⁷ *Ibid*.

³⁸ Concerned that Tibetans throughout Tibet, including those living in and around Shetongmon, are not being adequately consulted on mining projects, in March 2006, Tibet campaign and support group members in Canada formed an umbrella group and initiated contact with several Canadian mining companies operating in Tibet. The organizations forming the group were the Australia Tibet Council (www.atc.org.au), the Tibet Justice Center (www.tibetjustice.org), the Canada Tibet Committee (www.tibet.ca), the International Campaign for Tibet (www.savetibet.org), the Free Tibet Campaign (www.freetibet.org), Tibet Initiative Deutschland (www.tibet-initiative.de), the US Tibet Committee, Students for a Free Tibet (www.students-forafreetibet.org), Students for a Free Tibet Canada, and the International Tibet Independence Movement (www.rangzen.org). However, the umbrella group soon surmised that no evidence was presented that the mining companies' operations were being undertaken with the "free, prior and informed consent" of Tibetans affected by the projects, and it was concluded that these projects offered few if any tangible benefits to Tibetans inside Tibet. The umbrella group of campaign and support groups is now calling for a moratorium on mining activities by foreign companies in Tibet "until the Tibetan people can, for their own ends, and with full free, prior and informed consent, control and make decisions about the extraction and disposal of their mineral wealth using the highest standards of participatory governance and ecological management. For further information, see the Students for a Free Tibet dedicated website at: www.stopminingtibet.org.

³⁹ See Inter-Citic's website, available at: www.inter-citic.com.

⁴⁰ 'China's "Go West" Campaign and Globalization', *Tibetan Bulletin* March–April 2005, Volume 9 Issue 2, available at: www.tibet.net.

⁴¹ See: Dynasty Gold's website, available at: www.dynastygoldcorp.com. For a fuller list of foreign companies engaged in mining in Tibet, see the Students for a Free Tibet dedicated website at: www.stopminingtibet.org.

PERSPECTIVES

Black humor from Lhasa

A TIBETAN RESEARCHER FROM LHASA who now lives in exile in India provided ICT with his impressions of the current atmosphere for Tibetans living in Lhasa. Despite government promises of modernization and development, local Tibetans often see gambling, prostitution, and substance abuse as the railway's most obvious imports. The Tibetan who gave this account left Lhasa himself to travel into exile, encouraged by his family, who felt he would have a better chance for an education and to make something of his life.

“The popular Tibetan comedians Thupten and Migmar have a well known joke that describes Lhasa as having the highest concentration of night clubs and bars in the world. They describe an elderly man who goes for his circumambulation of the Barkhor taking longer than usual, because he has been diverted by the bar girls.¹

There's a darker truth in the joke. In Tibet, alcohol and cigarettes are sold very cheaply, even in remote villages where there is no road access. It looks to some Lhasa people like the government is encouraging people to be addicted to alcohol and tobacco by providing them at a very cheap price that everyone can afford. On one hand, the Chinese government is trying very hard to fulfill the materialistic desires of its people by making this and that economic reform, strongly believing that once the material desire of the people is met, the social stability and people's loyalty to the Communist Party will be enhanced. On the other hand, the government is spoiling people with the idea of materialism so that they are in a state of 'wooden mindedness' in which they no longer care about politics, social injustices and so on. So today in Lhasa some people are leading a sort of befuddled life. It is a common social phenomenon to see Tibetan parents addicted to gambling and drinking, while the children are skipping school, hanging out in night clubs and eventually end up only finishing half of their schooling.

People sometimes interpret this as being a strategic plan by the Chinese government, and which has been described in a popular political joke in Lhasa.

And so the leader of the Communist Party calls the TAR chairman and asks, 'What is everyone in Lhasa doing these days? Is everything under control?' The chairman of the TAR replies that they are all drinking and gambling. 'Good,' the Chinese leader says, 'Now I can rest assured that they won't cause any major problems.'”

¹ A Tibetan Government in Exile (TGiE) report on development in Tibet quoted Zhu Yalin, deputy director of Civil Affairs in Lhasa, as saying that Lhasa had the highest divorce rate in China at 20%. According to a *People's Daily* article in 2001, he said the reason was "domestic violence by drunken husbands, who played *mahjong* until late at night and also indulged in nightclubs and prostitution."



The 'blue truck' belonging to Chinese poachers photographed clandestinely by a Tibetan observer, who was horrified to find the skulls and skeletons of dead Tibetan antelope (chiru) nearby. The image shows antlers that have been dug into the sand as trophies of the slaughter. The killing of Tibetan antelopes by poachers, both Chinese and Tibetan, for their fine wool (*shahtoosh*) still poses a threat to the survival of this species, once abundant over vast areas of high-plateau grassland habitat. This report also shows how the development of transportation, including the railroad, and urbanization as a result, has become a new threat to the survival of the Tibetan antelope. IMAGE PROVIDED BY A TIBETAN SOURCE WHO WISHES TO REMAIN ANONYMOUS.

THE IMPACT OF THE RAILROAD ON TIBETAN WILDLIFE:

New threats to the 'high altitude Serengeti'

“The vision [of China’s Western Development Strategy] clearly seems to be one of a tamed landscape, bereft of those very qualities that currently make it a source of cultural pride for those with long histories there, and of romantic dreams for many in eastern China’s urban areas. Despite wildlife protection laws and nature reserves, the general direction seems to be to remove wildness from those lands still possessing it, evidently in the belief that doing so is necessary for moderization and progress. [...] The future is [...] one that I believe the Chinese themselves, both in the western plains and the eastern cities, will ultimately come to regret”.

— Conservationist, Richard B. Harris¹

Summary

IN RECENT DECADES, there has been a significant reduction in the number, variety, and range of wild animals on the Tibetan plateau, which has been described as a “high altitude Serengeti” thanks to its wilderness and the herds of wild herbivores and their predators who inhabit it.² Grassland ecosystems that once supported extensive animal movements and seasonal concentrations of large grazing animals are now seeing habitats diminished by urbanization and the construction of infrastructure. Additional threats are over-grazing and the reduced mobility of wildlife resulting from fencing and land privatization pursuant to a policy of nomad settlement. The health of wildlife populations is inextricably linked to the health of the land overall.

The Tibetan antelope, or chiru, once flourished widely on the high-altitude grasslands. While hunting and poaching for the chiru’s under-wool (*shahtoosh*) have long been the bane of this species and poaching continues, despite the authorities’ notable successes in reducing its scale over the last decade. But now urbanization — together with the transportation developments which make urbanization possible — constitutes a new threat to the survival of this species. Another species of antelope, Przewalski’s gazelle, is under serious threat of extinction largely due to China’s policies of fencing vast tracts of grassland in Qinghai Province.



A Tibetan observer who stumbled upon evidence of the slaughter of a group of Tibetan antelope (chiru) in eastern Tibet provided the following image to ICT under condition of anonymity. Once numbering almost a million strong, the chiru population has been estimated as recently as the 1990s as only 65,000-75,000 due to poaching for their fine under wool (shahtoosh). The chiru now face a new threat to their survival – the intrusion of the railroad and urbanization in their migrating grounds on the Tibetan plateau. IMAGE PROVIDED TO ICT BY A TIBETAN SOURCE WHO WISHES TO REMAIN ANONYMOUS.

New threat to the chiru's survival

One of the most publicized aspects of the railway across the Tibetan plateau when it was under construction was the provision of 'wildlife migration passages' at parts of the route that traverse the vast feeding and migration grounds of the Tibetan chiru, or antelope.³ The railroad forms the boundary between the Hoh Xil (Chinese: Kekexili) nature reserve to the west⁴ and the Sanjiangyuan reserve to the east in Golok Tibetan Autonomous Prefecture (Chinese: Guoluo TAP) in Qinghai Province — habitat of the chiru as well as the Tibetan wild ass and the wild yak, all of which make long journeys across the treeless grasslands to breed or forage for food and water.⁵

Rangelands expert Daniel Miller says: "The Tibetan antelope, perhaps more than any other animal, embodies the vastness of the Tibetan plateau ecosystem. [...] On the Tibetan plateau, the annual migration of the endangered Tibetan antelope from their winter ranges to their traditional birthing grounds is an event that reveals one of the earth's outstanding ecological spectacles. Like the migration of caribou in North America and wildebeest in East Africa, this annual event has taken place for thousands of years unimpeded by people, roads, or fences."⁵

The Tibetan antelope also has particular significance to the Chinese authorities since being adopted by Beijing as one of its five Olympic mascots.⁷

During the 20th century, however, the population declined greatly, and it is now listed as endangered on the 'Red List' of the International Union for Conservation of Nature and Natural Resources⁸ and listed on Appendix I of the Convention on International Trade in Endangered Species (CITES).⁹ In China it is a Class 1 protected animal. The distinguished American naturalist George Schaller estimated a historical population of 500,000–1,000,000 based on the limited information available. The total population in the mid 1990s may have been as low as 65,000–75,000,¹⁰ and was believed to be 70,000–100,000 in late 2007, according to an official report.¹¹ A 2003 wildlife census carried out in the eastern Chang Tang reserve (Chinese: Qiang Tang) found that the chiru population appeared to be recovering somewhat since the 1990s, and that kiang (wild ass) numbers may have doubled, while gazelles had become more abundant.¹²

The mass slaughter of chiru for their wool, which Kashmiri weavers make into shah-toosh shawls for the luxury market, prompted serious fears for the survival of the species in the 1990s.¹³ The poaching of the chiru in these remote, inhospitable areas of the Tibetan plateau is also linked to mining. For poor migrant workers, the remoter areas of the Tibetan plateau hold two main attractions: gold and wildlife. Many of the prospectors also hunt. These areas, protected in the past by their remoteness, have become increasingly accessible as a result of road and rail construction, and the greater availability of suitable vehicles.¹⁴ Local Tibetans are also involved in poaching, often coming from as far east as Chamdo (Chinese: Changdu).¹⁵

But anti-poaching efforts by the Chinese authorities, work by Tibetan and Chinese conservationists, and enforcement against the illegal trade have helped to reduce the killing. Most of the chiru now live in protected areas, although naturalists point out that the entire migratory range of the Tibetan antelope is not included within the boundaries of these reserves, and that reserve staff are poorly trained and equipped. The film *Kekexili: Mountain Patrol*, made in 2004 by Chinese director Lu Chuan, is regarded by environmentalists who work in the field as a largely accurate depiction of the struggle between vigilante Tibetan rangers, with little funding and proper equipment, and bands of primarily Hui Muslim Chinese poachers in the remote Tibetan region of Hoh Xil.

Today, the construction of the Qinghai-Tibet railroad and heavy traffic on the Golmud-Lhasa highway across key migration corridors have caused some disturbance to the antelopes' migration.¹⁶

Dr. Yang Qisen of the Institute of Zoology with the Chinese Academy of Sciences has acknowledged that it is inevitable the railway will affect the activities of wild animals on the Qinghai-Tibet plateau. He said that passages specially designed for animals to

cross the tracks are “a last resort in wild animal protection — a compensatory measure granted by humans to animals” for the line’s impact. The creation of the wildlife crossing passages along the rail route was the first use of such structures in China. Dr Yang, who believes that the Tibetan plateau has the most fragile ecosystem and the most unique biodiversity in China, even in the world, said that antelope and other wild animals are gradually adapting to the new environment by using the passages. But he said: “It is still too early to judge whether the passages are successful or not — it will take five to 10 years of the railway being in operation to make the necessary conclusions.”¹⁷

A recent study by a group of Chinese scholars evaluating the impact of the Qinghai-Tibet railway on the migration of the Tibetan antelope in the Hoh Xil National Nature Reserve concluded that the impact of infrastructure is now the main threat to the survival of the chiru.¹⁸ The Golmud-Lhasa railroad runs along the eastern boundary of the protected area, which covers 83,000 square km at an average elevation of 4800 meters, between the Tanggula and Kunlun mountain chains along the border between the TAR and Qinghai Province. The reserve contains one of the principal sources of the Yangtze River, and is home to more than 230 species of wild animals, 20 of which are under state protection, including the wild yak, wild donkey, white-lipped deer and brown bear, as well as the chiru.

Over a three-month period, the researchers, who all have long experience of working in conservation on the Tibetan plateau, used video cameras, counts and observation to monitor the movement of the migrating herd of Tibetan antelopes along the highway and railway. In their paper, published in July 2007, they write: “The railway is a physical barrier and its impact on the activity of chiru was visibly apparent. When antelopes reached the railway they hesitated under the slope of the rail bed and gathered into large groups. The modification of the land surface in the underpasses and along the railway appeared to have a major effect.” Even so, chiru did use the passages: “Therefore, although the railway structure itself does have significant impacts on the behavior of the chiru during migration, it does not disrupt the migration corridor.” The researchers warned that human activities, such as the activities of tourists, railway construction workers, truck drivers and others brought in by the railway also disturbed the chiru.

The scholars concluded: “Our results show that the efficiency of passages greatly improved between 2003 and 2004, and that use of wildlife corridors was affected by the structure of the passage, presence of wolves, recovery of vegetation following damage during construction, and other factors. The disturbance to migration of Tibetan antelopes included infrastructure, human activities, road traffic, construction of the railway and so on. The impact of infrastructure, especially transportation

development, on the habitat and migration of Tibetan antelopes is the main factor that threatens this species now and in the future.”

One researcher who has worked on the Tibetan plateau for many years and who asked not to be named told ICT: “It’s true that to an extent the chiru has adapted to crossing the railroad through the underpasses created by the authorities. But in general, the infrastructure that is developing along the rail route and the roads, the increasing urbanization, and illegal mining in the nature reserves, are likely to be a bigger threat to the antelopes’ survival than poaching.” There are fears too that the railway and increased construction in these areas will lead to increased access for poachers.

George Schaller observed wildlife using the underpasses on the railway track on a visit to the Chang Tang reserve in October 2006, three months after the railway’s opening. “The new railroad to Lhasa runs parallel to the highway. Wildlife readily uses its many underpasses, but is sometimes deterred by the heavy day-and-night traffic on the highway,” writes Schaller in an article published by the Wildlife Conservation Society.¹⁹ “The diminutive Tibetan gazelle, kiang, and even chiru graze at times by the highway, indicating good protection there — very different from the situation in 1986 when I last visited the area.”

In a more remote area of the chiru’s 250,000 square mile range, Schaller counted 6909 chiru. He describes the experience of monitoring wildlife in such a harsh environment: “The landscape turns into low, corrugated hills, their skeletons laid bare, peeled to bedrock by the elements, and there are plains abraded by wind and furrowed by dry water courses. Vegetation is scant. Tibetan Buddhism distinguishes 18 varieties of ‘void’, and this place seems to be yet another. [...] The silence is absolute. Not even a bird calls. My boots kick up lunar dust. [...] We carry 14 sheep carcasses and half a yak. A characteristic camp sound at dinnertime is Karma chopping frozen meat with an axe.”²⁰

Rangelands expert Daniel Miller says: “The continuation of Tibetan antelope migration, one of the last great ecological marvels on earth, depends on better protection of the species, improved understanding of their ecology and the dynamics of the Tibetan plateau ecosystem, and innovative approaches to conservation and pastoral development that adopt participatory, integrated ecosystem management models.”²¹

Many more Tibetans and Chinese living in the harsh conditions of the plateau are becoming aware of the importance of wildlife and environmental conservation, and environmental NGOs are raising awareness of ecological protection of the high plateau. Schaller refers to the consequences in one area of Qinghai which endured the heaviest

snowfall on record in October 1985. Most livestock, and wild animals, including chiru, starved to death, and the quality of the rangelands declined drastically. People had to hunt to survive. Schaller writes: “But, according to Buddhist beliefs, if you kill wildlife, the deities of the holy mountain Morwudan Zha will punish you; if you protect wildlife, there will be rewards. So in 1988, the village [Cuochi] banned hunting. Rangeland improved somewhat, wildlife increased, and even wolf predation on livestock decreased.” Although Schaller concluded in the same article that he viewed the status of the wildlife on the plateau with a measure of optimism, he acknowledges serious rangeland issues: “A practical land-use policy based not on impulse and intuition but on scientific understanding is needed — one in which nomads, livestock, and wildlife can co-exist without harming the land.”²²

Conservationist Richard B. Harris argues that Chinese efforts to monitor and understand the status of its wildlife have lagged well behind China’s scientific achievements in other fields, and that policies on wildlife reflect a general tendency to adopt solutions to natural resource extraction that are “simplistic and draconian, lack nuance and site specificity, and often cause unexpected negative consequences.” Professor Harris makes two general policy suggestions to deal with the prerequisite aspects of any successful wildlife conservation system, which are: “limiting direct killing to that which can be sustained indefinitely, and moderating and controlling adverse changes to natural habitats.”

Like other wildlife experts, Harris stresses the necessity for the involvement of local people and NGOs in preserving the wild habitat: “local, participatory institutions to manage harvest, curb individual behavior in deference to the group, and defend against state or corporate interests from outside have little history anywhere in China. Yet these must develop in parallel with any loosening of currently strict prohibitions.”²³

Extinction of Przewalski’s gazelle threatened due to fencing and settlement policy

Another species of antelope, Przewalski’s gazelle, is under serious threat of extinction largely due to China’s policies of fencing vast tracts of grassland in Qinghai Province. (See ‘Social exclusion as a result of China’s economic policies: Resettlement, relocation and urbanization’, p. 105.)

As of 2006, only 600 or so of the gazelles were believed to remain in the steppes and stabilized sand dunes around Qinghai Lake. The animal is classified as Critically

Endangered on the IUCN²⁴ Red List of Threatened Species, and with no captive breeding population, extinction is a real possibility.

According to a report published by the IUCN, a new study has confirmed that fencing of the grasslands is responsible for the dramatic decline in numbers of Przewalski's gazelle: "Fencing is physically preventing the gazelles moving within their historical range. [...] Gazelles shun small enclosures and tend only to use large enclosures, so some areas are now completely unsuitable for the species. One of the most distressing aspects is that fencing directly kills animals as they can become entangled in the wires when trying to jump over them."²⁵

The report, carried out by Dr. Jiang Zhigang, recommends urgent action in order to ensure the protection of the remaining few hundred of Przewalski's gazelles, including reducing fencing density by removing fencing in densely fenced areas, decreasing fence heights to 0.8 meters (2 feet 8 inches) or less, and establishing at least one reserve area dedicated to Przewalski's gazelle conservation.

PERSPECTIVES:

THE BLUE TRUCK — DISCOVERY OF A POACHERS' SLAUGHTER

While anti-poaching efforts in Tibetan areas have led to a recovery in the population of chiru, the species is still endangered and now faces a new threat from urbanization and development infrastructure within its territory. For Tibetans, the killing of chiru, an animal that is endemic to the plateau, and which for many has become a key symbol of the threat to the survival of the plateau's landscape, is deeply emotive. This first person account by a Tibetan who stumbled upon the carcasses of chiru in a nature reserve in Qinghai gives an insight into Tibetan views on poachers and the need for the preservation of the plateau's fragile ecosystem as a whole. The Tibetan's name and any details that might reveal his identity have been withheld, and the account has been edited by ICT from the original to protect the individual's identity.

"On our trip into northwestern Tibet, we were carrying enough provisions for two months. This arrangement was not for luxury but for our safety. Northwestern Tibet is unique because the land is very high and open, with many lakes and mountains and different species of wildlife. These places were inhabited from the beginning of time by the Tibetan nomads who have the same traditions as other ethnic Tibetans. Their simplicity is beyond the imagination. They live as friends with Mother Nature.



The 1142 km section of the railroad from Golmud to Lhasa traverses the vast high altitude plains mostly inhabited only by wild animals such as the Tibetan wild ass, or kiang, as shown in this image, and Tibetan antelope, or chiru. (July 2007.) IMAGE: ICT.

Our trip was more like an adventure tour. We had many destinations on the map but we didn't know much about the places. We didn't know which road to follow as there are many trails made by the nomads, miners, hunters and army. So we found our way by getting information from the nomadic families and using the GPS. Our goal was to explore the region.

After touring different valleys and beautiful lakes in four northern counties, we finally arrived at the farthest northern county called Gertse [Chinese: Gaize County in Ngari Prefecture in the north of the TAR]. We camped less than five km outside the large town with many garages, shops, restaurants, brothels, schools and government compounds. The majority of the residents are Chinese and Tibetan government workers, Muslim shopkeepers and students. They aren't many older Tibetans because they stay with their animals on the grasslands. We spent two nights there, fixing the vehicles and buying extra supplies of food, cigarettes, alcohol and gas. This would be the last town where we could get our supplies before we traveled further north towards the Kunlun range and the border of Xinjiang.

This region is a paradise for wildlife that can live around 4800 to 5200 meters above

sea-level. It's cold and dry with little fresh water for drinking. Streams which are running by day become frozen by night. So from now on, we had to conserve our water. We only did what was necessary — brushing our teeth and washing our hands. In this kind of dry and cold atmosphere, you can't wash your face every morning or you'll turn uglier and uglier.

From Gertse, it was a three-day journey through this 'paradise' for wildlife, towards the Kunlun range. At the beginning we followed the nomad's road and hunter's tracks. The plains were high and spacious, with many herds of antelopes and wild ass. Hunter's trails were everywhere, going in every direction. We didn't see much road-kill, just a few heads of wild yak and antelopes.

We woke up one morning when it was misty, windy and cold. The lake was frozen. We put extra sand around our tent, so the wind would not blow it away. Then we went to a nearby frozen lake with a pickax to fetch some water. For breakfast we had a hot rice beer with egg in it, which made us all sleepy. After a simple lunch of *tsampa* and dry meat, my friends started talking about the 1987 uprising in Lhasa. They told me about the rain of bullets, tear gas, and Tibetans tortured like dogs. The story made us all feel sad and quiet.

The next morning was warm and windless. We all wanted to explore the surrounding area, so each of us took our own path toward the hills. We were all excited about seeing some wild animals specially a *dong* (wild yak) which is double the size of a normal domestic yak. As I walked, the sun was hot, the ground dry. I caught sight of different herds of antelopes in the distance, some were resting, some eating, others running. After about an hour before reaching the top of the hill, I saw something blue on another hill.

Through my binoculars I could see it was a blue truck. My mind became busy with thoughts and criticism: I was sure it was a hunter's truck. I felt I should go and check who that ghost in the darkness was, followed by a great desire to punish the hunters. I thought, I had a Swiss knife, maybe I could rip the truck's tires. Then, I realized that if anybody was there, they would be illegal hunters with guns. They wouldn't ask first, they would just shoot me down.

I saw my friend waiting for me on the hilltop. He had also seen the blue truck. I told my plans and asked if he wanted to come with me. He was too afraid. After a good rest, he headed back to the camp with the news and I turned towards the truck with my dangerous and noble goal.



Yaks carrying dried brush loads in a remote area of Kham, present-day Sichuan province. Domesticated yaks are kept in Tibet primarily for their milk, fiber and meat as well as of beasts of burden. They transport goods across mountain passes for local farmers and traders as well as in support of climbing and trekking expeditions, and their dung is also burned as fuel. Wild yaks usually form groups of between 10 and 30 animals, and their habitat is treeless uplands. The Dalai Lama's elder brother, Thubten Jigme Norbu, described a sighting of wild yak on his journey from Amdo to Lhasa in 1950: "The sight of those beautiful and powerful beasts who from time immemorial have made their home on Tibet's high and barren plateaux never ceased to fascinate me... . Somehow these shy creatures manage to sustain themselves on the stunted grass roots which is all that nature provides in those parts. And what a wonderful sight it is to see a great herd of them plunging head down in a wild gallop across the steppes."

It took about an hour walking, crossing hill after hill. I stopped often to check with my binoculars to see if there were any hunters. Before getting to the truck in the final valley, I saw group of crows feeding on something. I felt pleased; I thought I was going to find a nice head of the antelope or the big wild yak head. But as I approached, closer and closer, the air stank of death. I saw the place red with carcasses. I felt sickened.

The hunters had stripped the antelope skins to sell for large amounts of money. They strip them immediately, so the carcasses don't freeze. I knew that some rich people would be wearing the furs of those dead antelopes by now. I counted 21 heads. All were very young, some didn't even have horns. The truck wasn't far away

and I didn't see anybody near it. I wondered if maybe they went somewhere else to do the killing. I knew that 21 dead antelope is nothing compared to the risk and hardship those hunters would have undertaken. Their business would be like the mafia and drug dealers: big risks, big profits.

By the fact that the truck didn't have a number plate or a registration address, I guessed that the hunters had left this area. But I reckoned that they were planning to come back again. They had taken the steering wheel, battery and other important parts of the vehicle's engine. The tracks nearby told me that they had come with two trucks and two or three motorbikes. I inspected the truck for clues and to see what else had been looted. There was an *OM MANI PADME HUNG* prayer sticker on one corner of the windshield which means the truck originally belonged to a Tibetan. But the waste around the campsite told me the hunters were not Tibetan. I didn't see any tea leaves near the fireplace, no bones, no white scarf, no bits of yak hair made into a rope, no cigarette butts and empty packets, no beer and wine bottles, and no empty cans of spam.

Instead there were only discarded Chinese shirts, instant noodle bowls, Red Bull drink cans and antelope and *dong* horns, wild ass leg bones and a small piece of wolf skin. My hunch is that they are [Hui] Chinese Muslims. Normally I like these Muslims better than the Tibetans because they don't smoke, they don't drink beer and wine, and they don't take the life of pigs. And besides that, they have a good spirit of unity. But after seeing this, I felt enraged.

I went back down to the camp with three fan belts and a useful metal rod on my shoulder, all taken from the truck. I regretted forgetting to puncture the tires. Everybody was worrying about my safety. They were about to go and find me, with whatever weapon they could carry. I exploded with my news. Everyone felt anger and sadness. Some said we should burn the truck, others thought we should loot the vehicle. I thought we could do both.

Then after tea, three drivers and I rolled up our sleeves and put on new cheap white gloves. We drove in a car with plenty of tools to strip the truck to the ground. We looted the radiator, two fuel tanks, drive shafts, alternator and two good tires. We didn't burn the truck because the area is very dry, but left it like a limping dog. We also wrote a warning letter on the surface of the door with a big thick permanent marker saying that we were from the wildlife protection office of the county. If they continue illegal hunting, they would have to pay the price with their lives according to the law."

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- ¹ Quoted in: 'Wildlife Conservation in China: Preserving the Habitat of China's Wild West', Richard B. Harris, M. E. Sharpe, 2008, p. 210. Professor Harris is Adjunct Associate Professor, Department of Ecosystem and Conservation Sciences, College of Forestry and Conservation, University of Montana.
- ² Dr. George Schaller, who believes the northwestern Tibetan plateau is one of the best remaining examples of native flora and fauna in central Asia, coined this term.
- ³ Although the authorities chose to promote these wildlife passages as having been created specifically to strengthen the 'green' credentials of the railway, many of the overpasses were in reality necessitated by the rolling terrain and seasonal watercourses.
- ⁴ Hoh Xil is a Mongolian name, meaning 'blue glass'. This is the common transliteration used for the nature reserve. 'Hoh', meaning blue, is transliterated differently elsewhere, for example, in 'Kokonor', or 'blue lake', the common transliteration of the Mongolian name for Qinghai Lake.
- ⁵ According to the International Fund for Animal Welfare (www.ifaw.org), chiru movement is complex, and both resident and migratory populations exist. Female and male movement patterns are different. Adult females and their female offspring move up to 300 km (186 miles) between winter mating grounds and summer calving grounds. Young males move from the herd and congregate with other young males, or adult males, until they eventually join a mixed herd.
- ⁶ 'Searching for grass and water: Grazing land ecosystem sustainability and herders' livelihoods in western China', by Daniel Miller, forthcoming paper kindly supplied to ICT by the author, 2007.
- ⁷ A cartoon representation of a Tibetan antelope called Yingying is one of the five official mascots for the 2008 Summer Olympics in Beijing.
- ⁸ See the website for the World Conservation Union at www.iucn.org; see also the site dedicated to the organization's 'Red List', at www.iucnredlist.org.
- ⁹ See the website for the Convention on International Trade in Endangered Species at www.cites.org. The chiru is also listed as endangered by the United States Fish and Wildlife Service.
- ¹⁰ 'Wildlife of the Tibetan Steppe', George Schaller, Wildlife Conservation Society & Tibetan Plateau Project, University of Chicago, Chicago, USA, 2000.
- ¹¹ 'Number of Tibetan antelopes dwindles to between 70,000 and 100,000', Agence France-Presse, December 15, 2007, archived by Tibet Environmental Watch, and available at: www.tew.org.
- ¹² 'Wildlife and nomads in the eastern Chang Tang reserve, Tibet', George B Schaller, Lu Zhi, Wang Hao, and Su Tie, *Memorie della Societa Italiana di Scienze Naturali e del Museo Civico di Storia Naturale di Milano*, Vol XXXIII, Fascicolo I.
- ¹³ The International Fund for Animal Welfare (IFAW) and the Wildlife Trust of India (WTI) reported that as many as three chirus must be slaughtered to stitch together one shahtoosh shawl, and that at one point 20,000 chirus were being butchered every year to feed the shahtoosh industry. On their 'Save the chiru' campaign website, www.shahtoosh.com, conservation organizations stated that 'shahtoosh is out, pashmina is in': "Yes, days of the shahtoosh shawl being a fashion statement are over. It is a prêt assertion written in gore and blood — the sight of which has moved the global fashion fraternity to rally together to denounce this shawl. It is no more chic to drape this shawl woven from wool taken from the Tibetan antelope or chiru, a highly endangered species found in the higher reaches of the Tibetan plateau in China."
- ¹⁴ The Mineral Resources Law (1996, amended version, came into force January 1, 1997) states that mining in "natural reserves and important scenic spots designated by the state" can only be carried out if "approved by the relevant departments in charge authorized by the State Council" (Art 20). But reports from the ground indicate that illegal mining continues in the natural reserves of Hoh Xil and other reserves.

- ¹⁵It would be misleading to conclude that all poaching of the chiru is carried out by outsiders. Hui Muslims sometimes rent rifles to local Tibetans to poach. Tibetans also kill chiru without guns — running them down by motorcycle. While the amount of poaching is down, it still goes on.
- ¹⁶There is evidence for at least four and possibly more major migratory Tibetan antelope populations on the Tibetan plateau, each with different migration routes.
- ¹⁷See: 'Further Environment Monitoring Urged for Qinghai-Tibet Railway', Xinhua, July 14, 2006, available at: www.china.org.cn, which reports on an interview with Dr Yang published in *Science Times* on July 12, 2006.
- ¹⁸'The effect of the Qinghai-Tibet railway on the migration of Tibetan antelope *Pantholops hodgsonii* in Hoh Xil National Nature Reserve, China', Lin Xia, Qisen Yang (Corresponding author), Zengchao Li, Yonghua Wu and Zuojian Feng, Institute of Zoology, Chinese Academy of Sciences, Beijing, China, *Oryx* (2007), 41: 352–357 Cambridge University Press, Doi:10.1017/S0030605307000116. Published online by Cambridge University Press 17, Oct 2007. Zuojian Feng, one of the authors, is Vice Secretary-General of the China Zoological Society, with over 40 years experience carrying out research in Qinghai and the TAR. He participated in the design of the animal-crossing structures for the Qinghai-Tibet railway.
- ¹⁹In the magazine *Wildlife Conservation*, August 2007, available at: www.wcs.org. This article available in the print edition only.
- ²⁰Source as endnote 6.
- ²¹Source as endnote 19.
- ²²Source as endnote 6, p. 30.
- ²³The World Conservation Union, or International Union for the Conservation of Nature and Natural Resources (IUCN) is a broad coalition of hundreds of NGOs International NGOs, and about 10,000 experts and scientists from countries around the world aimed at protecting the integrity and diversity of nature and ensuring that any use of natural resources is equitable and ecologically sustainable. See: www.iucn.org.
- ²⁴'Fencing Spells Disaster for the Last of China's Przewalski's Gazelles', the World Conservation Union, 2006, available at: www.iucn.org.
- ²⁵Source as endnote 1.



An image of modernization: Tibetans walk along a road in eastern Tibet, where state-sponsored urbanization and infrastructure construction is proceeding at a rapid pace. The characters on the road sign are entirely Chinese, following a pattern of the increasing use of the Chinese language in Tibet and marginalization of the Tibetan language. IMAGE: ICT.

PERSPECTIVES: THE RAILROAD'S FRAILITY

A journey across the roof of the world

AUTHOR PANKAJ MISHRA traveled on the railway to Lhasa in spring 2007. The account below of his journey is extracted from an article he wrote for *The New Yorker*, reproduced here with the kind permission of the author.

"[...] The Chinese rail network has expanded dramatically and become one of the largest in the world. Reaching Golmud, in Qinghai, in 1984 and Kashgar, in Xinjiang, in 1999, it has economically integrated these remote provinces, making them available for large-scale resettlement by Han Chinese immigrants, and strengthening Beijing's political control.

The link from Golmud to Lhasa, across the almost impassable Kunlun Mountains, which form a natural boundary at the north of the Tibetan plateau, has been the most ambitious of China's rail ventures. In 1889, visiting a country deeply humiliated by Western powers, Rudyard Kipling had wondered, 'What will happen when China really wakes up, runs a line from Shanghai to Lhasa... and controls her own gun-factories and arsenals?' China has now woken up.

Later in the afternoon, when I walked through the train, the Tibetans seemed fewer and more subdued. Most were in the cheapest, 'hard seats' carriage, tickets for which cost around fifty dollars. Built with scant regard for the human form, the hard seats encouraged a bolt-upright posture for forty-seven hours. The Tibetans had already slumped into a miasma of cigarette smoke and a faint smell of yak butter.

Many of the Chinese were grouped in the 'hard sleeper' compartments, tickets for which cost around a hundred dollars. Empty instant-noodle cups lay on the floor, the P.A. system was turned up high, and people shouted into cell phones. It was hard to spot potential immigrants among them. Was it the young rake with quasi-punk hair and Lenovo laptop, or the middle-aged man with the *People's Daily* open on a battered leather briefcase? In one cabin, six teen-age girls sprawled on narrow bunks, bored faces turned toward the door. There were more of them in the next cabin — two neat rows of equally listless expressions.

With the world outside obscured, a mood of lethargy and irresponsibility seemed to be spreading through the train. In the dining car, the guards, who had been stiffly solemn before their Chinese bosses, were flirting with the waitress. The coach attendants huddled in another corner of the car, smoking.

The commentary droned on: 'Dear passengers, tea is a common drink among Tibetan people.' I listened for a while, hoping for something like the story I had heard on the CCTV documentary of construction workers on the railroad stopping to let migrating antelope pass. But the P.A. system dealt mostly in bombast. Such-and-such a bridge or tunnel was a 'masterpiece' in the history of rail construction; the railroad was to help develop Tibet in a 'scientific, harmonious way.'

Neither modern science nor harmony seemed to have played much part in the development of the industrial city of Lanzhou, whose outskirts began to drift past the window in the afternoon — an assemblage of rusting machinery, slag heaps, and landfills; of chimneys and brick kilns belching thick smoke; of concrete tenements whose broken windowpanes were held together with cellophane and old newspapers. Western modes of mass production seemed to have re-created in China the squalor of nineteenth-century British coal and mill towns.

China's urbanization — arguably the most expansive and swiftest in history — has already exacted a steep environmental price from Tibet, whose rapidly melting glaciers feed the biggest rivers in Asia. The Marxist faith in the human ability to use technology to conquer nature means that there is no restraint in China on the Faustian fantasy of gigantic public projects, as demonstrated by the Three Gorges Dam, on the Yangtze River, which has already displaced 1.4 million people. When speaking of the railroad to Tibet, the Chinese sound like the true inheritors of the old European zeal for science and industry, as assured as colonial officials of another era were of their superiority over apparently benighted natives.

The railroad's frailty had become apparent in the weeks following its opening. Chinese engineers, however ingenious, had not fully reckoned with global warming, which was raising temperatures faster than expected, and the foundations of the rail line had already begun sinking into the permafrost by the end of July [2006]. Thawing could cause tracks to bend and slump, and bridges to crack. In late August, a dining car derailed two hundred and fifty miles north of Lhasa, with no apparent effect on the train's oxygen-supply system. I tried not to think about the journey's likely perils as I drifted off to sleep for the second night on the train.



A Tibetan worker early on in the laying of tracks. Most workers on the railroad have been Chinese, with Tibetans doing largely unskilled manual labor. PHOTO: ICT

While I slept, Qinghai, a barren, inhospitable land settled by Chinese political prisoners in the nineteen-fifties and sixties, passed in the night. The train steadily gained altitude. When I awoke, just after we passed Golmud, the air felt thin, although oxygen was now pumping hard into the compartment. Groggily, I opened the curtains and then sat dazzled before a startlingly white landscape — its forbidding aspect tempered and endowed with heartening intimacy by the unearthly radiance of Tibetan light. All through that morning, the train twisted and climbed through the Kunlun Range, between mountains with needle-sharp peaks and sunny slopes. Occasionally, the mountains retreated, and then treeless valleys opened alongside the tracks, scored by streams of a glittering chalky white. The artificial rose in my compartment now appeared translucent.

The train clattered past empty railway stations and huts with corrugated-tin roofing; they looked like temporary dwellings for construction and maintenance workers. The highway to Lhasa ran alongside us, empty except for an occasional military convoy.

The P.A. system announced the Tanggula Pass, the highest point of our journey. At sixteen thousand six hundred and forty feet, a thousand feet higher than Mont Blanc, the pass is higher than the altitude at which light aircraft fly. I had a mental image of the pass based on visits to other high passes in Tibet: the snowcapped mountains arrayed imperiously against the blue sky, supervising subsidiary ranges that stretched in rich layers below them. But I couldn't tell when we passed Tanggula. None of the cairns or prayer flags that frame views of Tibetan passes appeared. The railway seemed to have forgone some of the dramatic vistas offered by the road. It ascended gently to the Tibetan plateau, without any of the hairpin turns and loops of the kind that trains negotiate in the Himalayas.

The snow on the hills thinned, exposing wind-abraded rock. The ground showed through, brown and stony, and then we were in flat grassland with soft brown hills at the edge, their peaks sugared with snow and resembling the conical caps of Tibetan Buddhist sects.

Once, a herd of antelope skipped beside the tracks. Looking for more of them, I saw black nomad tents on a distant hillside. Yaks with white stripes on their backs appeared in the dank yellow grass. The train whizzed past empty stations; on the rare occasion that we stopped, there were hardly any Tibetans to be seen. This seemed the strangest aspect of a rail service designed to benefit local people: their meagre presence outside as well as inside the train.

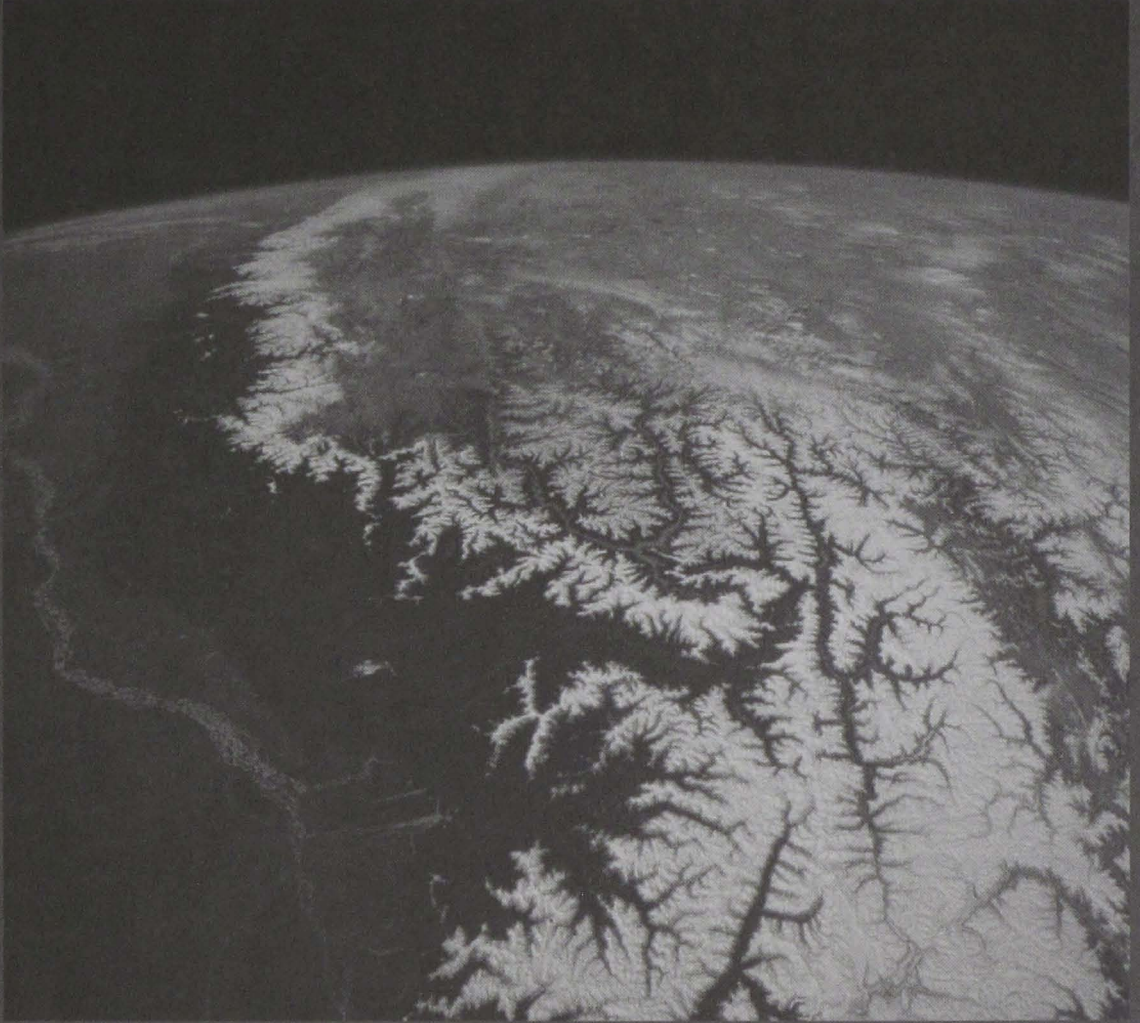
I read and napped for a while, and then took another walk through the train. I had a slight headache, and my swollen bag of dried apricots popped easily and spilled its contents on the floor. But the altitude was having a deeper effect on many people on the train. The guards I had seen carousing in the dining car looked drained, barely able to focus their eyes on the flat-screen television. In the chair car almost no one sat upright. The hard sleeper, too, was a mess of slumped bodies. A faint smell of vomit lingered in the air. Remarkably clean so far, the toilet in my carriage had begun to overflow.

Outside, a few walled settlements in the Tibetan style began to appear fortress-like houses with sloping walls; red, blue, and green prayer flags at the turrets; and flat roofs, often topped incongruously with the red flag bearing Communist stars. A few miles out of Nagqu, the biggest Tibetan town north of Lhasa, the sun began to set. Long blue

shadows crept down from the stony slopes of mountains even as the lingering light set their snow-flecked peaks ablaze.

On the highway, two leather-clad and goggled motorcyclists appeared, zooming through the jagged shadows on the tarmac, shrinking into the distance until they disappeared entirely. We passed a wide lake, the waves at its shore frozen into odd sculptural forms suggesting entrapment and desolation. As the train straightened after a long curving tunnel near Lhasa, a nomad emerged from his tent on a hillside. Fantastically dressed in fur hat, sheepskin coat, high boots, and silver buckles, he stopped and gazed at us — interlopers in his world — with what could have been either fear or disdain.”

— Pankaj Mishra, *The New Yorker*, April 16, 2007.



Tibet from space. Eastern Himalayan region, showing the Great Bend of the Brahmaputra River, where it makes a U-turn into India from its source in Tibet – where it is known as the Yarlung Zangbo. Because Tibet is the source of several of the world's largest rivers flowing into Asia, and plays a prominent role in the Asian monsoon system, the consequences of climate change on the plateau and China's policies of land use will affect the lives of millions of people downstream. Photo taken by NASA in February 1996. PHOTO ID NUMBER: STS075-721-13.

THE WORLD'S 'THIRD POLE'

Climate change and development in Tibet

“Special care of the Tibetan ecology is not only the concern of six million Tibetans but also millions of others in South Asia and China who depend upon the rivers.”

— The Dalai Lama, speaking on November 22, 2007

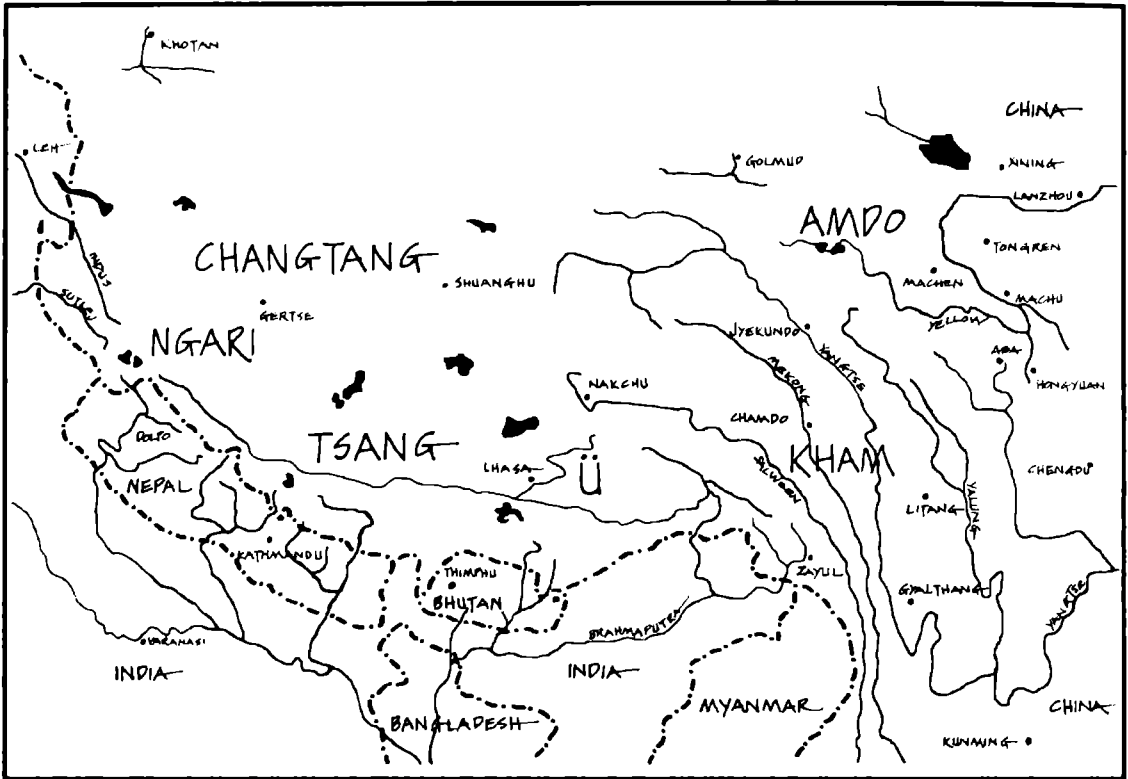
Summary

TIBET, OFTEN REFERRED TO AS THE ‘ROOF OF THE WORLD’ or the ‘world’s third pole’ because it contains the biggest ice fields outside of the Arctic and Antarctic, is threatened by melting glaciers and other extreme weather phenomena. Scientists believe that the Tibetan plateau offers an early warning of global climate change. Because Tibet is the source of several of the world’s largest rivers and plays a prominent role in the Asian monsoon system, the consequences will affect the lives of millions of people downstream as well as those on the high plateau. Scientists have warned that increased urbanization and the Qinghai-Tibet railroad may be contributing to the adverse effects.

There is a striking discrepancy between official admissions of the environmental crisis in the PRC, and the apparent refusal by the Chinese government to accept that this has any implications for development strategy in Tibet — an indication that Beijing’s policy on Tibet remains exempt from genuine debate or enquiry.

Tibet’s harsh and rugged climate masks a fragile ecosystem that is vulnerable to the effects of global climate change¹ — studies have found the effects of global warming more pronounced at higher elevations.² A 2007 study by the Tibet Autonomous Region (TAR) Meteorological Bureau found that the TAR is experiencing a 0.3°C increase in temperature every decade,³ over twice the global average,⁴ with four of the five warmest winters in the last 35 years in the TAR occurring since 2000;⁵ while the past century has been the warmest in 1000 years.⁶ Today, China as a whole is experiencing a 0.4°C rise every 100 years.⁷

Scientists believe that in Tibet as elsewhere one driver of climate change may be land cover and land use changes relating to agriculture and urbanization. These factors may



Rivers of Tibet. IMAGE COURTESY CHARLES GAY AND TASHI D. LEK

even outweigh 'greenhouse gas forcing'.⁸ "The many civil engineering projects currently under way, such as the construction of the Qinghai-Xizang railroad, combined with a conscious effort by China to urbanize the Tibetan plateau, will lead to further and likely greatly accelerated population increases and land surface changes in the future," said scientists Oliver W. Frauenfeld and Tingjun Zhang.⁹ "According to some studies, the carrying capacity of parts of the Tibetan Plateau has been far exceeded, partly due to inappropriate land management practices implemented in the 1950s. Additionally, urbanization, which can result in 8–11°C higher temperatures than in surrounding rural areas, has occurred on the Tibetan plateau in cities such as Lhasa, Golmud, and Xining."

The Director of the TAR Meteorological Bureau, Song Shanchong, confirmed in July 2007 that the "meteorological disasters exacerbated by global warming such as the rising of the snowline, the retreat of glaciers, the northward movement of permafrost, the loss of grassland, the eastward spread of desertification and the loss of biodiversity, are all posing an ever greater threat to Tibet's ecological systems."¹⁰

Greenpeace predicts that if current trends continue, 80% of Himalayan glaciers will be gone in 30 years.¹¹ A United Nations official even said that “there will be no snow and ice in the Himalayas in 50 years.”¹²

Scientists predict that the land cover on the Tibetan plateau will significantly change due to global warming. While glaciers and permafrost melt, areas covered by natural vegetation could expand; making more land available for farming and raising livestock. However, the mismanagement of expanding farming and pastoral areas, coupled with the increased chances of drought due to climate change, could instead result in increased desertification.¹³

Environmental problems on the plateau are compounded by a greater demand for water in the region on account of rapid development connected to the railway as well as a mounting influx of tourists and visitors. Since the opening of the Qinghai-Tibet railway, the TAR has experienced acute water shortages.¹⁴

Railway ‘could be unsafe’ due to climate change

It is impossible to predict whether the Qinghai-Tibet railroad will last and successfully withstand the fluctuating permafrost better than the highways. Some leading scientists are openly cautious, attributing their concerns to climate change, while experts have warned that parts of the track could become unstable, triggering derailments if warm weather melted frozen ground under the railway route.

China’s top meteorological expert, Qing Dahe, has said that climate change could certainly present a danger to travelers using the new railway. The head of China’s Meteorological Bureau told the *Beijing Morning Post* on March 10, 2007, that “Maintenance costs [for the railway] could be pushed up because of the unusual climatic conditions. Safety of passengers on the new railway and a new highway in Tibet could be affected by global warming.” The Chairman of the TAR government, Jampa Phuntsog, has denied that the railway is unsafe but admitted that a train derailed in spring 2007, with no casualties.¹⁵

The impact of climate change on Asia’s water resources

The immediate effects of global warming can be found in Tibet’s shrinking glaciers. The Tibetan plateau’s high-altitude location once maintained 36,000 glaciers (covering a

total area of 50,000 square km), but they have shrunk by an estimated 30% over the last 100 years.¹⁶ If current warming trends continue, glaciers 4 km in length and shorter are expected to completely melt with a 3°C increase in temperature, dramatically decreasing Tibet's glacier cover.¹⁷ This includes a 60% decrease in the glaciated area at the headwaters of the Driчу River (Yangtze River),¹⁸ Asia's longest.

The melting of glaciers means more flooding in the short-term and more droughts in the long-term. Liu Shiyin from the Chinese Academy of Science's Cold and Arid Regions Environment and Engineering Research Institute was quoted by Xinhua in July 2007 as saying that "the shrinking of glaciers has picked up speed in the past decades. While there might be more water in the rivers at present because of the increased melting, in the long run, the glacier water will decrease, and droughts will follow".¹⁹

Changes on the Tibetan plateau are crucial for the water resources (irrigation, drinking and hydro-electric power) of most of the Asian continent. A United Nations report found that half the world's population is dependent upon water from the Tibetan plateau and the Himalayas, where the Yangtze, Yellow and Mekong rivers also rise.²⁰ The rivers originating on the Tibetan Plateau, which include the Yangtze, Yellow, Mekong, Brahmaputra, Indus, Karnali, Sutlej, Irrawaddy, Salween, and the Arun,²¹ feed 11 large deltas that have formed along Asia's coastal zones.²² Any change in the water level and supply of these rivers would affect millions of people dependent on these waters.²³

There is increasing concern in countries downstream (notably India) about the impact of China's accelerated development policies on water resources, as well as the implications of proposals for dams and water diversion projects on the plateau. An Indian analyst commented with concern on plans for a water diversion project impacting the Brahmaputra, intended to address China's shortage of water, and which may go ahead in 2009.²⁴ "The existing barrage on the Sutlej river and the planned structures on Brahmaputra have the potential to control river flows into India," explained M.S. Menon, a former member secretary of the Indian National Committee on Irrigation and Drainage, in an article in the Indian press. "For example, if the Chinese divert waters during the glacier melting periods and release large flood flows during the monsoon, Indian irrigation and power projects would suffer." Menon pointed out that several years ago, for instance, floods from the Tibetan Brahmaputra devastated many parts of Arunachal Pradesh, and that the flow patterns indicated dam failure. "Though China denied it, satellite imageries confirmed broken structures," he said.

There are currently no agreements between India and China on trans-boundary rivers, which means that China is not answerable to India with regard to dam or water

diversion projects upstream under any treaty provisions. There has recently been interest from China in activating a joint mechanism with India set up in November 2006 for sharing hydrological information on these rivers.²⁵

Climate change has also been cited as one factor contributing to the shrinking of wetlands at the source of the Yellow and Yangtze Rivers, reducing the amount of water that flows down the rivers. China's state-run news agency, Xinhua, reported on research by scientists from the Institute of Mountain Hazards and Environment at the Chinese Academy of Science (CAS) who studied the Tibetan plateau's wetlands over a 40-year period and found that they have shrunk by more than 10%. The wetlands feeding into the Yangtze River alone have been reduced by 29%. Despite increased rainfall in the region, the water level in the wetlands has dropped due to increased evaporation caused by global warming.²⁶

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- ¹ 'Climatic Warming in the Tibetan Plateau During Recent Decades', Chen and Liu, *International Journal of Climatology* 20: 1729–1742 (2000), p. 1.
- ² *Ibid.* See also: 'An Overview of Glaciers, Glacier Retreat, and Subsequent Impacts in Nepal, India and China', World Wildlife Fund (WWF), p. 11, available at: www.panda.org.
- ³ 'Meteorological disasters exacerbated by global warming threatening Tibet's ecological systems' [全球气候变暖引起的气象灾害正加剧对西藏生态系统的威胁], Xinhua, November 20, 2007, available (in Chinese) at: <http://news.xinhuanet.com>.
- ⁴ 'Tibet warming at twice global average, says study' Asian News International, July 25, 2007, archived at *New Scientist*, available at: www.newscientist.com.
- ⁵ 'Research: Tibet's average annual temperature up 0.3 degree Celsius in every 10 years', Xinhua, July 22, available at: news.xinhuanet.com.
- ⁶ 'A High-Resolution Millennial Record of the South Asian Monsoon from Himalayan Ice Cores', Thompson, L.G., et al. *Science* 289, 1916 (2000).
- ⁷ *Ibid.*
- ⁸ Anthropogenic' greenhouse gas forcing is generally considered to be the main cause of the observed warming in high-elevation areas. Anthropogenic effects, processes, objects, or materials are those that are derived from human activities, as opposed to those occurring in natural environments without human influences. Oliver W. Frauenfeld (NSIDC/CIRES CPP) and Tingjun Zhang (NSIDC/CIRES CPP) write: "Like elsewhere on the globe, an equally important anthropogenic component to climate change may be land cover and land use changes on the TP [Tibetan Plateau]. These local—regional surface effects related to agriculture and urbanization potentially outweigh greenhouse gas forcing. In fact, our recent research has shown that plateau-averaged station records, biased toward low-lying populated regions, show a warming trend of 0.16°C decade — 1 over the last 50+ years. However, plateau-wide trends from an independent data source free of surface contamination indicate no trend. This has led us to hypothesize that, indeed, land use/cover change (LUCC) could largely account for the reported warming on the Tibetan plateau." "Is Climate Change on the Tibetan Plateau Driven by Land Use/Cover Change?", a winning proposal for the Cooperative Institute for Research in Environmental Sciences Innovative Research Program, 2005, jointly sponsored by the University of Colorado at Boulder and the Office of Oceanic and Atmospheric Research at NOAA.
- ⁹ *Ibid.*
- ¹⁰ Source as endnote 4.
- ¹¹ 'Expedition documents melting Himalayan glaciers', Guanli Wang, Greenpeace, June 5, 2007, www.greenpeace.org.
- ¹² Comment made by Surendra Shrestha, regional director of the United Nations Environmental Program for Asia and the Pacific, while attending a conference sponsored by the International Centre for Integrated Mountain Development (ICIMOD) in Kathmandu. See: 'Vanishing Himalayan Glaciers Threaten a Billion', Reuters, June 5, 2007, archived by Planet Ark, available at: www.planetark.org.
- ¹³ 'Climate Change 2007: Impacts, Adaptation and Vulnerability', contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), Cruz, R.V., H. Harasawa, M. Lal, S. Wu, Y. Anokhin, B. Punsalma, Y. Honda, M. Jafari, C. Li and N. Huu Ninh, 2007; Eds: M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Cambridge University Press, Cambridge, UK, pp. 469–506; p. 486.
- ¹⁴ The government now plans to build a new pipeline to extend the water coverage area of existing supplies, doubling the current water supply available by 2020. 'Tibet water supply to double by 2020', Xinhua, May 16, 2007, available at: <http://info.tibet.cn>.

- ¹⁵'Travellers At Risk From Global Warming On Tibet Railway', AFP, March 10, 2007, archived at *Terra Daily*, available at: www.terradaily.com.
- ¹⁶'Climate change sucks water from China's two longest rivers', Xinhua, July 15, 2007, available at: <http://news.xinhuanet.com>.
- ¹⁷'Climate Change 2007: Impacts, Adaptation and Vulnerability', contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), Cruz, R.V., H. Harasawa, M. Lal, S. Wu, Y. Anokhin, B. Punsalmaa, Y. Honda, M. Jafari, C. Li and N. Huu Ninh, 2007; Eds: M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Cambridge University Press, Cambridge, UK, pp. 469–506; Figure 10.4, p. 481.
- ¹⁸*Ibid.*, p. 493.
- ¹⁹'Glaciers melting at alarming speed', *China Daily*, July 24, 2007, available at: www.chinadaily.com.cn.
- ²⁰'The Melting Himalayas: Regional Challenges and Local Impacts of Climate Change on Mountain Ecosystems and Livelihoods' by Xu Jianchu, Arun Shrestha, Rameshananda Vaidya, Mats Eriksson, and Kenneth Hewitt. International Centre for Integrated Mountain Development (ICIMOD), June 2007, p. 1, available at: www.icimod.org.
- ²¹See: 'Tibet's Environment and Development Issues', Environmental Desk of the Department of Information and International Relations, Tibetan Government in Exile, available at: www.tibet.net.
- ²²*Climate Change 2007: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), Cruz, R.V., H. Harasawa, M. Lal, S. Wu, Y. Anokhin, B. Punsalmaa, Y. Honda, M. Jafari, C. Li and N. Huu Ninh, 2007; Eds: M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Cambridge University Press, Cambridge, UK, pp. 469–506; p. 493 IPCC.
- ²³*Ibid.*
- ²⁴'A Flood of problems': Commentary by M S Menon, former member secretary, Indian National Committee on Irrigation and Drainage, *The Pioneer*, India, December 18, 2007. Menon describes the project as follows: "After many such reports in the media, in 2003, Chinese official news agency, Xinhua, confirmed plans for Tsangpo Water Diversion Project having two components: One, a power plant with an installed capacity of more than 40,000 mw to utilise the potential of the river falling through 3000 m in a length of 200 km; two, the diversion of water by pumping to the north-western provinces of Xingjiang and Gansu. The project will be sited at the Great Bend where the river takes a U-turn to enter India; the construction is scheduled from 2009."
- ²⁵*Ibid.*
- ²⁶Source as endnote 16.



In stark contrast to grazing on the open rangelands, these goats make do with a patch of scrubby grass in a nomad settlement camp in eastern Tibet. IMAGE: ICT

PERSPECTIVES

A way ahead – protecting a culture of global importance

DIGITAL TECHNOLOGY has brought not only unprecedented access to information for many Tibetans inside Tibet, but also a new means of sharing ideas and creating relationships with people who would otherwise be strangers. Tibetans fluent in Chinese are exchanging views in virtual space about such sensitive subjects as the Dalai Lama, Tibet's political future, and economic development. Writer and commentator Tashi Rabgey, who has studied the phenomenon, says: "For Tibetans, the significance of this technological innovation is particularly striking because of the limits that have been imposed on public communication and expression in Tibetan-speaking areas during the post-Mao era. [...] Just as 20 years ago the advent of print media and literary journals triggered a burst of interest in self-expression and social critique, the recent arrival of the Internet has heightened the self-awareness and reflectiveness of an entirely new generation of Tibetans." Tashi Rabgey points out that this new generation constitutes fully bilingual and bicultural Tibetans who, despite being brought up in a Chinese-ruled Tibet, are experiencing a minor renaissance of Tibetan cultural identity and are newly aware of a political struggle being waged in their name.¹

The following essay was written by a Tibetan intellectual who uses the pen name Bozawa, and was carried by several Chinese and Tibetan websites throughout the world. The essay is reproduced in full here, as it is rare that Tibetan voices and opinions are heard from inside Tibet, particularly when giving suggestions for maintaining Tibetan cultural identity and economic integrity in the face of Chinese government policies which are seen as wholly unsympathetic to Tibetans.

Bozawa (Lhasa): From inside Tibet, a Tibetan's suggestions for resolving the Tibet question²

1. Maintain and establish a unique traditional economic environment and atmosphere in the ethnic regions, and formulate protective policies with substantive significance for the nationalities' economy.

The benefits currently brought to Tibet by the center's³ economic policies are very obvious indeed, but primarily the greatest beneficiaries are not the people of Tibet (I must stress that referring here to the people of Tibet does not indicate just Tibetan people, but includes also the Han and Hui peoples who have lived in and have moved to Tibet in

the previous hundred years). Looking at the current situation in places throughout Tibet, there is the obvious point that the people who have been the greatest beneficiaries are outsiders who have come to Tibet from various Han provinces and cities. In this regard, people cannot avoid being suspicious of the motivation and the propaganda surrounding the center's investments in Tibet.

The difference in Tibet's economy prior to 1959 compared to now beggars description, but in practice the extremely backward economy based on the millennia-old animal husbandry industry at the very least still had its independence and its special human characteristics. I myself have no intention of appealing for the return of the economic levels of Tibet in the middle ages, but if one looks at Tibet's economy from when the center took control of it through to the policies of reform and opening up, there is in actual fact no evidence that Tibet's economy — compared to other provinces' economies — will ever be anything except last. And the possibility cannot be denied that under the positive influence of external assistance, the Tibetan economy could actually be very well run by Tibetan people taking full control.

Even if the Tibetan economy were to unexpectedly realize its potential and explode into life, the Tibetan people would still have to lose their passive economic status — or at least avoid losing their dominant economic status — or else they'll sink into the same pitiful state as the American Indian.

In order to avoid the disastrous road of 'American Imperialism' I suggest that there should be 'Ethnicized, Modernized, and Localized' reforms carried out to Tibet's economic policies. 'Ethnicized' refers to macro-economic policies which are changed to protect the Tibetan people's dominant position in the Tibetan economy, granting economically preferential and beneficial policies to the Tibetan-run economy, and to consider opening up and granting subsidies to economic bodies from outside Tibet to trade in areas in which Tibetans cannot operate for reasons of their ideology or customs, but which would still be under the overall control of Tibet's local management offices.

A 'modernized' Tibetan economy is actually not in conflict with an 'ethnicized' Tibetan economy. Evident proof of this is contributed by the recent abundance of modern enterprises in the economic realm run by Tibetans in Tibet. Although these enterprises do not play a dominant economic role, the social benefits that a small number of these enterprises bring to society are highly noteworthy, and are usually reported in China's media in glowing terms. In the Tibet of the future, economic entities run by Tibetan people themselves will need to rely on conditions that they create for themselves. Under the influence of rationally using resources and outside technical assis-

tance, and using the influence also of China's overall economic growth, new highs can be attained for modernized enterprises in their 'management levels', 'personnel quality' and 'economic strengths'. Under such circumstances the Tibetan people will first be able to take a proud social and economic position, and it is only with such a self-endowed economic background that the region's people's ethnic culture can stand tall and stop losing ground.

The 'localized' referred to above is a supplement to 'ethniced' and 'modernized' and is the manifestation of a trend towards the Tibetan people in Tibet assuming the absolute dominant role in the Tibetan economy. It is only if the Tibetan people can establish such an economic position for themselves that they will not be cast outside of Tibet's social and developmental mainstream.

2. External economic factors should respect religious and cultural beliefs in nationality areas.

At present, in the course of Tibet's economic development, people coming from outside are economically superior, and the majority of high-value economic domains are still controlled by outsiders. At the same time as making good money in Tibet, they bring with them to Tibet the same kind of service industries that once flourished in Saigon during the Vietnam War. The prevalence of brothels and bars and dance halls is no less than anything else seen in any mid-sized city in the Chinese interior. Such depravity and degeneracy beneath a gleaming façade is at enormous variance with the everyday lives of Tibet's broad masses and is having an impact on the healthy development of a new generation of Tibetans. Tibet has an ancient history and culture whose depth and profundity are a richness for all mankind and are an important constituent of today's global culture. It is the duty of the Tibetan people first and foremost to protect this cultural heritage. The fruit of these entertainment industries, whose sole pursuit is profit and which leave no benefit to the region or to society, is to a certain degree the same as the corrosive effects of opium upon the soul. Therefore, in order to fully implement the state's relevant policies on protecting culture in the minority regions and in accordance with stipulations in the third [*sic* — should be fourth] General Principle of the Constitution of the People's Republic of China — 'The state helps the areas inhabited by minority nationalities speed up their economic and cultural development in accordance with the peculiarities and needs of the different minority nationalities' — it is hoped that some necessarily restrictive measures can be placed on the rampant spread of Tibet's non-local entertainment culture.

3. Permit the Dalai Lama and other overseas Tibetans to visit Tibet in a private capacity and provide channels of communication for them.

It has long been said that “The Dalai Lama is the key to solving the Tibet question”; I myself have no intention of using the papers and essays of Tibetologists inside and out of Tibet to reiterate that point here. I believe that the Chinese Communist Party which consistently advocates “seek truth from facts” as a standard for right and wrong also once recognized this.

Evidence for this can be seen in the late Chinese leader Deng Xiaoping’s unequivocal line: “You can talk about anything except Tibetan independence”. Lets set aside for the time being the myriad arguments between both sides over the years; it cannot be denied that the Tibet question exists, and the question itself cannot be denied further by means of ‘trivializing’ or of ‘over-stating’ it. Therefore, in order to manifest the Chinese government’s enlightenment and initiative when handling those parts of the Tibet problem which touch upon China’s international image, and in order to meet the sole religious demand of religious believers inside Tibet, and in order to end the more than 40-years foreign exile of 100,000 Tibetan compatriots, and in order to eliminate a major reason for separatism, and in order to completely and thoroughly protect unification, the Dalai Lama and other overseas Tibetans should be permitted to visit Tibet in a private capacity, and there should be provision for channels of communication. In order for both sides to eliminate misgivings, both sides can jointly adopt simplified procedures for clearing immigration control, for appointing and organizing the members and structure of visiting groups ahead of time, and for agenda planning and ensuring a certain amount of secrecy around travel plans, and thereby replace many years of vengefulness and animosity with co-operation. As far as the Chinese government is concerned, this would be a strategic achievement of epoch-defining significance.

4. Re-appraise Tibet’s ‘new countryside construction project’, protecting the rights of people to live independent lives.

The Tibet new countryside construction project, initiated with huge investment from the state, has already begun. From a common-sense point of view, if someone spends money to build you a home it should be a joyous affair. Never mind whether the masses themselves get any actual benefit from all these thousands of identical, commune-style and collectivized housing construction projects: looking at the plan from the point of its implementation, there is enormous legal and moral doubts of whether citizens’ rights to live independent lives have been infringed upon by concentrating so many nomads’ and farmers’ homes alongside roads. Raising people’s standards of liv-

ing isn't solely about living in concentrated communities close to roads or about living in homes that all look the same. If even the most basic rights to lead an independent life and be an independent resident are suppressed, and even if there is a notable economic benefit, there is still the possibility of losing people's loyalty.

The variety and richness of a nationality's culture is manifested in the whole, which is itself made up of countless abstract constituent parts. That culture is not to be used for lining up in rows in a new countryside to be shown on the television news. If this kind of thing could truly bring economic benefits and cultural development to the nomadic and farming masses, why is there no such proclamation of a 'rural economy "roadification" movement' along the national highways and expressways in Beijing's suburbs? China, as a great economic empire among developing nations, has I believe more economists working on research than the entire population of Lhasa; based on lessons from the many years of economic work and experiences of the Great Leap Forward and Collectivization, they will not commit similar mistakes. It can thus be seen that carrying out construction projects such as these is merely window dressing. But spending money to buy 'face' is never going to win people's hearts, because at the same time as you buy someone a home, you deprive them of the right to an independent life.

5. Respect the cultural traditions of the nationalities, thoroughly implement the TAR's relevant rules and regulations on protecting and developing the Tibetan language.

In the 1980s the TAR government formulated regulations on work to develop the Tibetan language. But with regard to current usage of the Tibetan language, the regulations can only be described as nominal. One of the stipulations is that the Tibetan language should be studied and used by Han cadres in Tibet, but the reality of the situation is that more than 99% of Han cadres cannot speak or read even the most basic Tibetan.

To give a simple example, documents on the 'spirit' of meetings held by the central Party and government and by the TAR People's government as well as the TAR Party committee are issued to lower work units in various areas in both Chinese and Tibetan versions. However, in the process of being issued, the Tibetan-language versions disappear either because of the existence of more Han cadres in the lower levels of government, or because people don't want to be troubled with printing them. This is how even Party and state policy documents are truncated and lost, and so what good can this be doing to the Tibetan language? Looking at it from the bottom up, when the Cheng'guan District in Lhasa City had its 2006 NPC election, there was no written

Tibetan on the ballot paper. Those 'liberated serf' Party members who barely have a word of Chinese were obviously confused, and labored under a sense of abandonment by the CCP.

Tibetans make up the absolute majority of the population of Tibet, but that does not necessarily mean those using the Tibetan language are Tibetan people. All over Tibet there are non-Tibetan people of Tibet who are religious believers and who slowly over the course of history have come to use Tibetan for their involvement in day to day and religious activities, such as the Tibetan Muslims who came to Tibet a hundred years ago and traders from Nepal. In addition, there are people of Tibet using the Tibetan language including Bön adherents and Catholics.

With regard to the situation described above, the language used by the people of Tibet all over Tibet is Tibetan, and yet for 50 years Tibetan audiences have only had two stations with Tibetan programs, one of which uses the Amdo dialect. With regard to middle and elementary school students, the only remaining courses taught in the Tibetan language are mathematics, natural science and Tibetan itself. Tibetan students can participate in all manner of regional and even national writing competitions but there is no such regional competition for writing in Tibetan nor for Tibetan calligraphy. It is extremely worrying how schools in Lhasa are reducing the time set aside for studying the Tibetan language. There are only two avenues open for students who major in Tibetan, one of which is to stay at home and be a professional writer in Tibetan; and the other is to leave home and cut oneself off from roots and family. Conversely, a Han student or cadre will never have difficulties finding work or being promoted to the position of a high official just because they do not understand Tibetan. This is even more the case in the outside world, where the 'development' of the Tibetan language can be seen on advertisements and billboards for big cell-phone companies and e-mail companies through to general store signboards: the Tibetan script is either tiny or unclear, or it's incomplete or spelt wrong or the translation is laughably poor, or the Tibetan script is simply not there.

Examples of the above are too many to mention. In order to truly develop and protect the Tibetan language, we should start by rationally creating the social conditions for the development of the Tibetan language and draft new regulations for the development and protection of the Tibetan language. If such work could start with the education, employment, promotion, professional title and wage levels of Tibetan cadres, government workers and students, it would be a useful social mechanism. It would be impractical to compel all Han cadres in Tibet to study Tibetan, but for those grass-roots level Han cadres in Tibet who regularly come into contact with the Tibetan masses, it is extremely necessary that they are able to read a little, speak a little and write a little Tibetan.

6. Stop large, environmentally destructive mining projects.

As the roof of the world, everyone knows the impact that Tibet's environment and climate has on the rest of the world. With regard to protecting the environment for the existence of all mankind, the wanton stripping away of ecological systems from the planet's surface has a disastrous impact on the environment. Strengthening the protection of Tibet's natural environment directly impacts neighboring ecological systems and indeed those of the entire world. This in itself should be reason enough to stop large, environmentally destructive mining projects.

7. Strengthen the moral training and education of a small number of government religion workers, and relax administrative controls on religious work units.

Due to many reasons such as the increase in numbers of outsiders, there has in recent decades in Tibet been several unseemly instances where an extremely small minority of government religion workers do not observe laws and morality. Such behavior has not been managed or supervised by the relevant departments; conversely, methods were used which were in contravention of many of China's current laws and regulations, and actions which put administrative restrictions on religious venues were implemented. In order to further manifest the state's implementation of policies on freedom of religious belief, and religious work units and venues' legal rights to independence, it is suggested that administrative controls at religious work units, as well as all other methods of inappropriate interference in activities, should be relaxed.

8. Carry out the systematic construction of education in nationalities' traditional culture and the fine arts.

The richness and importance of Tibetan culture and fine art will no longer be limited due to lack of space or explanations. The rapturous reception around the world to exhibitions of Tibetan culture and art are enough to prove that they have more of a market than just in Tibet. The brief profusion of Lhasa *Nangma* bars further proves the point. Currently in Tibet there are indeed many official artistic work units such as song and dance troupes, nationalities' artistic troupes and Tibetan drama troupes, and there are places of study for nationalities' arts such as the Academy of Art at Tibet University, and the Tibet Drama Group. Although they all play a certain important role in the preservation and development of nationalities' culture and art, it is not enough to rely on them alone. In a market of complete commercialization, work should be done towards the commercialization of minority culture, such as investing in the estab-

ishment of profitable minority culture performance centers. Otherwise, art centers currently in all parts of Tibet will never be anything more than snack bars and cinemas. With regard to education in culture and the arts, it is nowhere near enough to simply open an academy of art or a Tibetan theater group; with regard to Lhasa there are palaces and folk art classes for the systematized strengthening of *Kalu*, *Nangma*, and *Duixie*, but there is no systematic, specialized or long-term education work on these art forms in the arts education systems described above. This therefore is one of the reasons why several years ago the phenomenon of *Nangma* bars died out.

9. Exercise overall control over the numbers of outsiders coming to the region to work.

Currently, there are many different influences combining to affect the vital interests of Tibetans, not the least of which is allowing large numbers of outsiders to come to Tibet — the biggest hidden danger in creating contradictions between the Tibetan and Han people. Tibetans need outsiders to come to supplement the economy, but it is not simply suppressing and reversing the numbers of outsiders going to Tibet that will make the Tibetan people attain true happiness. It is only by increasing controls on the transfer of labor out of Tibet that both parties — both nationalities — can achieve long-term stability and development. The *Lhasa Evening News* reported in April 2007 or thereabouts that Tibet's labor supply is already greater than demand. Therefore, from the high position of protecting unity between Han and Tibetans, there should be large-scale overall controls on the numbers of workers coming to Tibet.

10. Extend the same policies to Tibetans inside and outside Tibet as those granted to Han people either side of the Taiwan Straits, recognizing, supporting and encouraging exchanges between Tibetans at home and abroad, and stopping the total exclusion of Tibetan society from abroad.

The following is a report issued by the Information Office of the State Council in April 2006 on relations across the Taiwan Straits:

'In order to realize the normal comings and goings of people on both sides of the Straits and the unity of the state, the Chinese government at the same time as advocating peaceful re-unification has adopted a series of measures to promote the development of relations between both sides:

'On the political front, adjust relevant policies and measures to alleviate confronta-

tional sentiments. The Supreme People's Court and the Supreme People's Procuratorate have decided to no longer legally pursue Taiwan's legislators for criminal behavior prior to the establishment of the People's Republic of China.

'On the military front, take the initiative to relax the military stalemate on both sides of the Straits, to stop bombardments of islands such as Jinmen, and to open some advanced defenses and observation stations in Fujian as economic development zones and tourist spots.

'On the economic front, open wide the door and promote exchange, to welcome entrepreneurs from Taiwan to invest on the mainland and to engage in trade, and provide them with favorable conditions and legal protections.

'The Chinese government will adopt a positive attitude towards the comings and goings of other personnel, electronic communications and science and technology, culture, sports, academia and news, and will adopt appropriate measures for encouraging the development of exchanges and cooperation in all areas on both sides of the Straits. A government-approved civil organization, the "Cross-Straits Relationship Association" is to be established to create connections with Taiwan's "Straits Exchange Foundation" and other relevant civil organizations, thereby protecting the legal interests of people on both side of the Straits and promoting the development of relations on both sides of the Straits.'

The Chinese government's policies and measures on Taiwan have gained the acceptance and understanding of more and more Taiwanese compatriots, Hong Kong and Macao compatriots, overseas Chinese and people in China. The broad masses of Taiwanese compatriots have put a great deal of effort into developing the relationship across the Strait. The Taiwanese authorities in recent years have appropriately adjusted their policies towards the mainland, and have adopted more relaxed measures such as allowing people on the island to visit family on the mainland, gradually relaxing the restrictions on civil exchanges between both sides of the Straits, expanding indirect trade, liberating indirect investment, and simplifying telephone, postal and currency exchange procedures between compatriots on both sides of the Straits. All of this is beneficial to mutual communication. There has been rapid growth in trade between both sides of the Straits in recent years, and there has been a constant expansion in exchange activities. Four agreements were signed at the Wanggu Forum held in April 1993, which was a historic step in the development of relations between both sides of the Straits. There was a relaxation in the atmosphere between both sides of the Straits that had not existed for the 40 previous years, and this was beneficial to peace and to

peaceful re-unification.

To return to the topic, Taiwan has been an inseparable part of China since antiquity. Dharamsala, the small town in northern India is not like this, and I do not believe Dharamsala has ever had a dispute over its sovereignty. But there are more than 140,000 Tibetan compatriots who live in Dharamsala and in other countries throughout the world. There's a line from a song by a singer exiled in India several decades ago — 'I never sold Lhasa, I never bought India' — which fully reflects Tibetan exiles' desire to return to their roots. If Tibet is a part of China, then they are naturally overseas Chinese, and they shall imminently be afforded the same 'united treatment' as Taiwanese compatriots to return to the motherland. Conversely, if they deny, covertly deny or in any other way avoid the reality of the question, this is tantamount to denying their own sovereignty over Tibet. To break through the icy policies which keep Tibetan compatriots abroad so apart from their families at home would be enormously beneficial to the great undertaking of unifying China and a correct resolution of the Tibet question. But the current implementation of Tibetan compatriot policies, which are a throwback to pre-1978, can explain why the door has been closed on Tibetan compatriots abroad returning to the motherland. Naturally, the Chinese government's pre-1978 policies and the wording used today in the spotlight of international opinion could not be more different. On the surface, there is nothing in recent policies on the coming and goings of Tibetans at home and abroad that would seem remarkable to the people of China, but in reality all manner of obstacles have been placed in the way of Tibetan people coming and going across the border, such as canceling or refusing domestic and foreign art troupes from traveling (it was forbidden to sell non-political programs in Lhasa made by overseas Tibetan NGOs), forbidding Tibetans from sending their sons and daughters abroad (particularly to India) to study, applying high-pressure tactics on Tibetans who do go abroad such as threatening to rescind their pensions, and the prevalent attitude towards overseas Tibetans of 'If you haven't your independence, you cannot come home'. And so from the high vantage point of unification of the nationalities, the same policies of unification granted to Taiwan's compatriots should be granted to overseas Tibetans. Meanwhile, in order to solve the Tibet problem while sparing no efforts to develop cultural exchanges between the two peoples, this will also fundamentally solve the problem of overseas exiled Tibetans by paving a solid united front path.

April 7, 2007.

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- ¹ 'Bringing Tibetans together through cyber-space: the impact of China's digital revolution on a new generation', by Tashi Rabgey, an edited extract from an unpublished paper featured in ICT's book *Incomparable Warriors: Non-violent resistance in contemporary Tibet*, 2005, available to order from ICT's online store at www.savetibet.org. According to a report by the China Information Network Center in January 2004 quoted by Rabgey, there are approximately 86,000 Internet users in the Tibet Autonomous Region alone and 195,000 in Qinghai.
- ² 'Bozawa (Lhasa): From Inside Tibet, a Tibetan's suggestions for resolving the Tibet question' [博扎瓦 (拉萨): 境内藏人解决西藏问题的建议], Bowen Press [博闻社], April 13, 2007, available at: <http://bowenpress.com>.
- ³ The term 'the center' is frequently used to refer to both the central government in Beijing, or to the central Party in Beijing.



On October 17, 2007, the Dalai Lama was honored with the Congressional Gold Medal, presented by the US President, in a high-profile ceremony. Despite the risks of showing their loyalty to the Tibetan religious leader, all over Tibet, people celebrated. This image depicts flames shooting from an incense kiln outside the sacred Jokhang Temple in Lhasa on the day of the Gold Medal ceremony. When the flames burn as brightly as they did on that day, it is a sign that Tibetans are making more offerings than usual of alcohol, butter, and medicinal herbs – the smoke is an offering. Observers reported that despite warnings from the authorities not to celebrate, Tibetans still circumambulated the Jokhang in their best clothes and with a devotional spirit. A water-cannon was parked nearby but notably did not quench the flames or disperse the crowds. The image is a powerful representation of the continued loyalty and devotion of Tibetans in Tibet to both their exiled religious leader, as well as their determination against the odds to protect their religious culture.

IMAGE: ZOEANN MURPHY.

RECOMMENDATIONS

THE FOLLOWING RECOMMENDATIONS represent a way forward for Tibet. Their purpose is to ensure that the expansion of Tibet's economy will be of benefit to Tibetans. Unless such guidelines are followed, the new railway to Tibet will intensify existing migratory trends, exacerbate ethnic income disparities, and further marginalize Tibetans accustomed to traditional economic pursuits, especially Tibetan nomads.

For the Government of the People's Republic of China (PRC):

- Adopt laws and regulations for Tibetans that allow the implementation of genuine autonomy so that Tibetans have the rights and means to participate in decision-making on the development of Tibet. As the legislative assembly nominally elected by Tibetans has failed to legislate to protect the land leases and livelihoods of nomads, local democracy, such as is increasingly practiced in China, could enable local communities to gain a public voice.
- Impose a moratorium on the settlement of Tibetan nomads displaced by development, pending an independent assessment, including a legal review, of policies that require or produce displacement and resettlement, the confiscation of property and the imposed slaughter of livestock.
- In all instances of displacement and settlement of Tibetan nomads, offer affected persons the opportunity to return or settle in an area nearby or like the one from which they were moved, and provide legally-mandated compensation beyond subsistence rations, until such time that alternative livelihoods are available.
- Prioritize investment in 'soft' infrastructure, such as health and education, rather than 'hard' infrastructure, such as railroads and highways, in order to develop human capacities and improve living conditions of Tibetans.
- Achieve six years of primary education for all rural primary-school-aged Tibetan children, using the Tibetan language as the primary language of instruction, and nine years in urban areas, in accordance with long-held public policy in China's minority nationality autonomous regions.

- Provide Tibetans with universal local access to basic health care, reinforced by a Community Medical System health insurance program.
- Provide adequate income support to eliminate completely absolute poverty among the most disadvantaged Tibetans in the most resource-deficient areas.
- Provide adequate resources to meet the need for vocational skills training for Tibetans in both rural and urban areas, including vocational skills curricula in primary and middle schools.
- Offer access and support to bilateral technical assistance providers and international NGO programming that provides small loans to rural Tibetan households for investment in new income-generating activities, to rural and urban employable skills training, to Tibetan enterprise support and development, and to reform of rural education to include basic employable skills curricula.
- Provide incentives to Tibetans for establishing eco-friendly tourism ventures that support the traditional Tibetan Buddhist culture, including the protection of sacred landscape locations and non-interference with monastic life, and that employ large numbers of Tibetans.
- Establish new conservation protected areas and encourage local Tibetan participation in the planning and implementation of conservation, park ranger and tourist activities. Do not support protected areas which exclude local communities.

Specific recommendations for strengthening rural livelihoods

Current policy on the settlement of Tibetan nomads has led to increased rangeland degradation and goes against state-of-the-art information and analyses for livestock production in pastoral areas. This body of scientific knowledge champions the mobility of herds as a way to sustain the grasslands and livelihoods and points to the conclusion that settling nomads is not necessary for water source conservancy, nor appropriate, nor consistent with poverty alleviation.

- Focus development programs at local community levels, requiring the development of sustainable participatory mechanisms for community-based natural resource management.

- Provide the necessary support to grasslands scientists to refine existing models of grassland ecology and to work with economists, livestock specialists, and pastoral development experts to design appropriate management systems for livestock production.
- Examine and clearly articulate linkages between the ecological aspects of conserving the biodiversity and watershed values of the grasslands and the economic benefits and goals of sustainable development in Tibetan pastoral areas.
- Adopt and implement policies that encourage livestock mobility and empower nomads to manage their own rangelands.
- Invest in the re-sowing of native grasses in areas that have become degraded and actively employ nomads to do the sowing and caring for the re-vegetated pastures.
- Provide nomads with sufficient social security and livestock insurance within an integrated rangeland management policy that aims at supporting sustainable, mobile pastoralism.
- Determine whether settlement will render individuals vulnerable to violation of other human rights.
- Provide adequate and reasonable notice for all affected persons displaced by development.
- Inform communities of legal channels through which they can challenge a demand to resettle, make legal assistance available, and ensure that claimants receive a fair adjudication.
- In order to ensure transparency and accountability in the process of settlement, institutionalize genuine community consultation that facilitates participation by all those affected by the policies.
- Implement mechanisms by which low-income citizens can easily access information on proposed settlements.
- Where those affected by settlement are unable to provide for themselves, take all appropriate measures to ensure that adequate alternatives are available, including the opportunity to return to a herding livelihood.

- To comply with the recommendations of the United Nations Committee on Economic, Social, and Cultural Rights and other human rights treaty obligations, review the new Property Rights Law 2007 to ensure it provides the greatest possible security of tenure to occupiers of houses and land.
- Uphold the rights to freedom of expression, assembly, and association. Recognize the rights of herders to speak out publicly on settlement, legal regulations, and other issues of concern.

Recommendations for investors

- Investors in all areas designated as “Tibetan autonomous counties, prefectures or regions” should be especially aware that normal business practices of community engagement, consultation, stakeholder involvement and informed consent of all affected communities are especially difficult to achieve in Tibet, requiring special efforts beyond what suffices elsewhere.
- Investors, whether equity partners, partners in joint ventures, contractors or suppliers of technology, services or capital, should recognize the high profile of Tibet globally, and meaningfully engage all stakeholders, including Tibetans and their supporters worldwide, in order to preserve corporate reputations.
- Investors should adopt global best practice standards, going further than technical compliance with national laws, in order to comply earlier rather than later with emerging global values and expectations of socially responsible investment in areas of minority ethnicity where freedom of expression is curtailed.
- Investors in tourism, hotels, hospitality, entertainment and leisure have special opportunity to invest in training Tibetan staff to occupy managerial positions, and to be the public face of their operations at all levels.
- Investors in mining, resource extraction, processing, concentration and smelting of metals, salts, oil and gas should be particularly aware of the existence of a global public highly aware of Tibet, whose values, like those of Tibetans everywhere, give higher priority to conservation and biodiversity protection than wealth accumulation. Stakeholders, both in Tibet and globally, will expect investors in mining to:

- impartially educate local Tibetan communities, through independent third party consultants using the Tibetan language, to understand and consider the full range of long-term environmental and social impacts that can be anticipated from proposed mines and processing plants.
- pay compensation, royalties and resource rental taxes to local communities, rather than provincial or national authorities.
- set aside sufficient sums to remediate environmental impacts which may occur not only during the productive life cycle of a mine but well after mine closure, especially during extreme weather, earthquakes, floods etc.

To development agencies and international donors:

- Prioritize developing Tibetan human resources instead of following a model of development typical of a city in inland China that prioritizes raising GDP.
- Project design phase should engage local Tibetan communities at an early stage, even if this requires extra time, so local communities can learn and consider options, impacts and long-term consequences.
- Project implementation should not be left to a Chinese government department or bureau. Effective and meaningful development in Tibetan areas delivers benefits to Tibetans only when the external provider of development finance also closely supervises disbursement and ongoing engagement with local Tibetan communities. Project activities, documentation and reporting to stakeholders should be in Tibetan as well as other languages; and Tibetan-speaking staff should be engaged from design and inception through to implementation and evaluation.
- In practice, be guided by the development guidelines promulgated by the Central Tibetan Administration in Dharamsala.
- Support international NGO programs that provide small loans to rural Tibetan households for investment in new income-generating activities, that offer employable-skills training in rural and urban areas, that support and develop Tibetan enterprises, or that infuse basic employable-skills into rural school curricula.
- Particularly for those international donors funding anti-corruption and environ-

mental protection projects in China, raise the concerns addressed in this report. Encourage the formation within Tibet of community-based organizations that enable local people to voice their concerns without fear of punishment.

- Before entering into any partnerships or contractual dealings with the national or local governments of China, obtain assurances that the land for projects was acquired in a manner consistent with human rights obligations, and that former residents were adequately notified and compensated for their loss of land, property, and income.
- Adopt explicit policies in support of human rights and establish procedures to ensure that the financing of or participation in projects does not contribute to or result in human rights abuses. At a minimum, implement a policy to conduct a “human rights impact assessment” in coordination with local civil society groups.
- Uphold the rights to freedom of expression, assembly, and association. Recognize the rights of Tibetans to speak out publicly on settlement, legal regulations, and other issues of concern.
- Ensure that your infrastructure projects do not result in forced settlement or relocation.
- Press the Chinese government to adopt the recommendations listed in this report.

To the United Nations:

- Request from the Chinese government a report on compliance with the UN Declaration on the Right to Development for presentation at the UN Human Rights Council.
- The U.N. Special Rapporteur on Adequate Housing should request an invitation to conduct a mission to Tibet.
- The U.N. Special Rapporteur on Human Rights and the Fundamental Freedoms Indigenous Peoples should raise concerns about the impact of the railroad and Chinese government economic policies on Tibetan lives and livelihoods, and should request an invitation to conduct a mission to Tibet. He should conduct research in all areas designated as Tibetan counties, prefectures and regions, meas-

uring actual poverty, actual rural household consumption, access to basic services, and progress towards Millennium Development Goals. He should make his findings public.

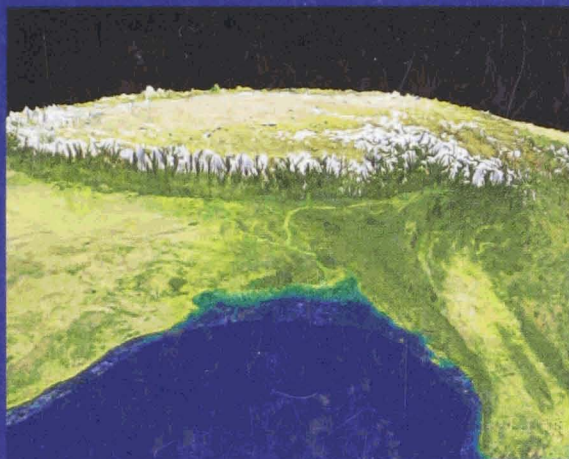
- The U.N. High Commissioner for Human Rights should address the General Assembly expressing concern at the Chinese government's failure to uphold the rights of Tibetans to freedom of expression, assembly, and association, including the rights of herders to speak out publicly on resettlement, legal regulations, and other issues concerning development.
- The U.N. Special Rapporteur on Education should press for adequate funding for the education of Tibetan children. The downshifting of responsibility for financing schools to poor counties and poor families should be reversed, with central leaders accepting responsibility for investing in Tibetan human capital formation.
- The Human Rights Council should endorse the Basic Principles and Guidelines on Displacement and Relocation presented by the Special Rapporteur on Adequate Housing in his 2006 report to the Council, and invite China to approve guidelines for such displacement as soon as possible.
- The Human Rights Council and the United Nations Committee on Economic, Social and Cultural Rights should raise questions about the social exclusion and marginalization of Tibetans resulting from China's economic policies and the advent of the railroad.

**The International Campaign for Tibet
works to promote human rights and democratic
freedoms for the people of Tibet.**

ICT:

- monitors and reports on human rights, environmental and socio economic conditions in Tibet,
- advocates for Tibetans imprisoned for their political or religious beliefs,
- works with governments to develop policies and programs to help Tibetans,
- secures humanitarian and development assistance for Tibetans,
- mobilizes individuals and the international community to take action on behalf of Tibetans, and
- promotes self-determination for the Tibetan people through negotiations between the Chinese government and the Dalai Lama.

Founded in 1988, ICT is a non-profit membership organization with offices in Washington, DC; Amsterdam, Berlin and Brussels.



The Tibetan plateau – the 'roof of the world'
– taken from space. IMAGE COURTESY OF NASA.

The International Campaign for Tibet is a non-profit membership organization that monitors and promotes internationally recognized human rights in Tibet. ICT was founded in 1988 and has offices in Washington, DC, Amsterdam, Berlin and Brussels.

TRACKING THE STEEL DRAGON

How China's economic policies and the railway are transforming Tibet

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