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Tibet 2003: State of the Environment

[Environment and Development Desk; Department of Information and International Relations; Central Tibetan Administration; Dharamsala, India. White Paper, July, 2003]

Resource Extraction: State of the Environment

Under China's constitution, all resources belong to the State and it is the prerogative of the State to develop and exploit natural resources. This allows resource exploitation to be carried out directly by the State or with its active support and approval.

The methods by which resource extraction is undertaken - without proper assessment of social and environmental impacts - is of urgent and grave concern. Due to rampant official corruption, and the connivance of district authorities, resource exploitation across the plateau is causing irreversible damage to the environment and causing hardship to local inhabitants.

As of today, there are no safeguards to ensure environmental regulations or systems in place allowing Tibetans to have a say and share in resource extraction enterprises. Under the present system, Tibet's natural resources are utilised by the PRC as a "national asset" and are being transferred to the resource-starved processing industries in eastern and coastal China. No benefits and "trickle down" effects accrue to Tibetans. An equal concern is that these resource extraction enterprises attract a large influx of direct and indirect Chinese labour to Tibetan regions - placing unsustainable pressure on the local environment's already overstrained capacity.

From Beijing's viewpoint Tibet abounds in natural capital awaiting commercial uses in China. Minerals, medicinal herbs, forests, glaciers, snow mountains and rivers all are targets for exploitation via Beijing's published plans to intensify the commercialisation of resources from its far west in the 21st century.

Water Resource Exploitation: Long-term Consequences

Although exploitation of Tibet's abundant water wealth is a key component of the current Western Development Program, the 2003 white paper seldom touches on this vital resource. Clearly this is because China's dam-building and water diversion

[What's New](#)[Reports](#)[Wildlife](#)[Geography](#)[Development](#)[Zone of Peace](#)[Dalai Lama](#)[Publications](#)[Announcements](#)[Links](#)[Site Map](#)

agenda - and the State's international transboundary policies - directly threaten the integrity of Asia's river systems fed by the Tibetan Plateau and the survival of the millions of Asians who depend on them.

With the Tibetan headwaters of at least 10 Asian rivers feeding into densely populated countries like Pakistan, India, China, Nepal, Bangladesh, Myanmar, Thailand, Laos, Cambodia, and Vietnam, conservation of the origins of these waterways is of global concern.

The mighty Mekong rises as the Zachu River in Eastern Tibet's Kham Province and carries glacial melt down through China, Myanmar, Laos, Thailand, Cambodia and Vietnam. But China is now blocking its upstream flow with a mammoth 292-metre-high dam costing US\$6 billion which will displace 38,640 inhabitants by its completion date in 2013.

The Xiaowan Dam's 4200 mw capacity will allow Yunnan Province to sell hydropower to Thailand as an integral part of the infrastructure of the Western Development Program. China's new nationwide powergrid plans 14 new hydro-dams on the Mekong and Yangtze rivers - adding to the PRC's over 22,000 existing large dams.

While Thai industry gains, other downstream nations are fearful. Their foreboding is confirmed by Robert Tyson of the Smithsonian Tropical Research Institute, USA. This leading fisheries expert warns that, "The Chinese hydropower dams, canalisation for navigation, and heavy commercial shipping will kill the river. The dam will be a menace to livelihoods, property and life in all of the downstream countries." The head of Green Watershed, a Chinese environmental NGO, points out that China launched its massive dam building enterprise without consulting neighbouring countries or assessing downstream impacts. "On an international river, no country should be selfish," says Xu Xiaogang, a mainland academic and environmental activist.

Tibetan concerns differ from the fears of countries downstream on the Mekong. Southeastern Tibet is known by geologists to be rich in copper and gold reserves and a major zinc deposit is located to the north of Xiaowan Dam. Cargoes of Tibetan mineral ore can in future be shipped downstream to link up with a proposed Asian Development Bank-funded rail line to Lijiang on Tibet's southeastern border.

But perhaps it is the ecological and visual destruction of a region of legendary beauty and exceptional biodiversity that is most painful for Tibetans. The proposed US\$ 250 million dam on Megoe Lake (Ch: Mugecuo), 21 km from Dartsedo (Ch: Kangding) - the traditional Tibetan border town with pre-1949 China - will be a blight on Kham's most legendary and sacred lake. This pilgrimage lake at 4,000 m is surrounded by over 30 smaller lakes and a mountainous landscape that draws ecologists, botanists, geologists and landscape photographers. It is a prime example

of Tibet's ecological purity in its "primordial state" that Beijing proudly boasts of in its current white paper. And then, simultaneously, plans to destroy.

The Tibetan Plateau is also important in its own right as a geologically distinct home to diverse ecosystems. These headwaters support a rich variety of species of plants and animals compared to other drainage basins. China's white paper refers to Tibet's wetlands: "The Tibet Autonomous Region has more than six million ha of wetland, ranking first in China". But no mention is made of the PRC's current plans for a massive south-to-north water transfer project that would destroy the wetlands of Amdo's Zoige (Ch: Ruergai) region at the great bend of the Ma Chu (Ch: Huang Hao, aka. Yellow River) as it rounds the Amnye Machen mountain range.

Although the white paper says: "A policy is implemented ensuring that no new construction, reconstruction and expansion projects shall be authorized unless an evaluation of their impact on the environment has been conducted", the reality is that the western route of the proposed south-north water diversion project has been approved without conducting such a study. Preliminary work on the project is already underway and major infrastructure construction is scheduled to begin in 2010.

The project includes building at least three mega-dams and blasting a series of tunnels hundreds of kilometres long through the eastern Tibetan Plateau and mountain ranges, thereby diverting headwaters of the Yangtze into the parched, overexploited Yellow River of north China. When completed, the canals will divert up to 20 billion cubic metres of water annually to meet mounting water demands in the central and north-eastern provinces of China. The benefits to Tibet are zero. The costs include: Disruption of river hydrology; destruction of pristine ecosystems due to large-scale construction work to build massive dams and the innumerable explosions necessary to build tunnels through the Bayan Ha mountains; permanent disruption of the traditional livelihood of people living near the construction site; and dilution of Tibetan identity by a great influx of Chinese workers. Critics envisage a "Chinese water-industrial complex" that perpetuates water-related construction work in China on a massive scale to further its own economic, ideological, and bureaucratic interests, rather than those of its people, or their natural environment. Consequently, Beijing's official water development policy is guided by technological fixes of supply management linking water-related construction to economic growth and national pride.

Internationally, China's non-participation in the 1997 UN Convention on the Law of the Non-navigational Uses of International Watercourses highlights the State's antisocial practice of unilateral large-scale development on the upper reaches of transnational rivers - like the Mekong.

Deforestation

The UNDP's China Human Development Report 2002 says: "There is probably very little mature forest left in China at all. China loses high quality mature forests in the northeast [Manchuria] and southwest [Tibet], while at the same time trees are planted in other parts of the country, but for other purposes."

State-owned enterprises, through their ubiquitous "quota system", continue to carry out clear-felling of Tibet's old growth forests, and these enterprises employ large workforces of non-Tibetan labour. The timber is trucked or transported by river to China. The State-owned enterprises then sell Tibet's timber resources at low State-controlled prices to other State enterprises, which manufacture railway sleepers, mine pit props and construction timber.

In 1987 an official Chinese publication revealed that in just one Tibetan prefecture - Kanlho in Gansu Province - extracted logs, if laid end to end, would encircle the planet twice. None of this ecological devastation of the Tibetan Plateau appears in China's white paper, which restricts itself to the so-called "Tibet Autonomous Region", omitting more than half the Tibetan areas of Qinghai, Gansu, Sichuan and Yunnan. But the most flagrant clear-fell logging and subsequent soil erosion happened in areas of eastern Tibet lying outside the "Tibet Autonomous Region" and today incorporated into China.

The wholesale deforestation of Tibet has had adverse impacts on wildlife due to destruction of habitat and the unprecedented human presence, which in turn leads to wildlife poaching for meat consumption, for skins and the sale of organs to the lucrative market for Chinese medicine. The devastating side effects of clear-fell deforestation on wildlife are well documented and publicised by global experts and NGOs.

Logging Ban: A Positive Move But Is It Effective?

In 1998, China announced a nation-wide logging ban, a welcome move that offers the promise of reforesting the barren slopes descending to the river valleys that are Tibet's water towers feeding Mainland China and most of South and Southeast Asia.

In 1998 Tibetans could look forward to playing an active role in reforestation, a chance to be employed in restoring the balance of nature. It is now five years since the logging ban was imposed by Beijing on Tibet's provincial and local authorities, whose revenues relied on logging enterprises. Only five years ago China finally faced up to the stark choice between Tibet's lucrative timber trade and conserving water. Previously both commodities were viewed as a free supply of Tibetan natural capital.

The disastrous Yangtze River floods of 1998 forced Beijing's hand. China, rightly,

chose water as the more precious commodity - a policy decision requiring that the upper reaches of watersheds be revegetated if extremes of flood and drought in China were to be avoided in future.

The UNDP's China Human Development Report 2002 says that, with the ban on logging, Beijing has shifted the problem of deforestation to neighbouring countries that do not have effective law enforcement mechanisms.

However, inside Tibet, particularly in the eastern regions, we have strong reasons to fear that illegal logging still continues. Based on our eyewitness information, today it has simply become more expensive to acquire logging permits by bribing local officials. This merely adds to the cost, making timber a luxury commodity attracting more black economy operators to Tibetan regions.

Reports of the US Department of Agriculture monitoring the situation on the ground confirm the eyewitness testimony of refugees arriving in exile that logging continues. The UNDP's China Human Development Report 2002 notes that: "Managers of State-owned forests are charged with the contradictory goals of making profit while at the same time keeping large workforces employed. There are strong incentives for managers to sell products through the black market."

Video footage filmed secretly in 2002 in south-eastern Tibet, near Markham, shows ongoing felling long after the logging ban was announced. The footage shows in detail the use of a new tactic to subvert the logging ban. In late spring, hillsides of mature pine trees are set on fire, killing the foliage but leaving the trunks largely intact. The blackened trees are officially worthless, so cutting is then permitted. This is carried out on a large scale, utilising a workforce of hundreds of labourers who not only cut the trees and mill them in logging camps, but also bulldoze in access tracks.

The footage shows square-cut sawn logs indicating that a portable sawmill has been trucked in - equipment available only to the State Forestry Bureau. After hasty removal, usually by trucks arriving at night, the floor of the former forest is littered with rejected trunks, bark, branches and a tangle of residue.

The spindly, charred trunks of trees too immature for commercial use remain standing, but local Tibetans inhabitants are forbidden to clean up the slopes and make use of the waste wood. Nor are Tibetans employed to do the logging; only immigrant Chinese. The scale of operations and methods suggest this could not be happening without official knowledge.

The video footage reveals sheet erosion and the steep gullies that result from this catastrophic loss of mature forest cover. The only area where reforestation has been attempted is along major roads travelled by foreign tourists.

The burning of a forest that does not readily or naturally ignite - and is not adapted to a fire regime - is especially harmful to regeneration, and burning in late spring kills many animals rearing their young. Other wildlife is caught in steel traps widely used by immigrant labour. In addition, the livelihoods of neighbouring Tibetans - who historically enjoyed a cash income by collecting forest mushrooms to sell to the international shitake market at good profits - are adversely affected.

Markham region is at the farthest eastern edge of the "Tibet Autonomous Region" - remote from Lhasa - and it seems the local Forestry Bureau office was closed when logging officially finished after 1998, so no government policing of the forest wealth exists today.

Aerial Sowing and Mountain Closure: Inappropriate Ways To Reforest

In the aftermath of the catastrophic 1998 Yangtze flooding, China's immediate ban on logging was a clear signal that deforestation was acknowledged as a major contributing factor. It is certainly true that deforestation results in the increase of sediment loads in rivers and a loss of the water-retaining capacity of watersheds. Deforestation also can affect the flow of rivers and cause flooding. However, two other important factors that trigger floods - loss of wetlands and river engineering along the lower regions in China - are relevant, particularly to the PRC.

At present China has put its money on reforestation alone to tackle flooding. The logging ban was therefore a blessing in disguise for the forests of Tibet.

This has an important bearing on the way China has implemented reforestation in the Tibetan region. Reforestation is the official policy. The way it is carried out, according to reports published by Chinese ecologists of the Sichuan Academy of Forestry in 2001, excludes Tibetan communities from any benefit, participation, compensation or employment opportunities.

The ensuing "mountain closure" policy today covers nine million ha - or one third of the western region of Sichuan Province high on the Tibetan Plateau. The method China commonly uses to sow tree seeds is by dropping them from aircraft. Not only is this ineffective, it also excludes Tibetan communities from involvement in eco-husbandry. Without acknowledging the enormous extent of its deforestation activities, Beijing's white paper lists methods of reforesting Tibet, all of which exclude active participation by Tibetans. "Tibet has adopted measures consisting of afforestation, aerial sowing and closing off hillsides to facilitate afforestation," the paper boasts.

According to China's own statistics, it will take 50 years at best before reforestation shows results. Yet the destruction of these forests began in the 1950s, and the erosion of steep denuded slopes has worsened ever since.

In formerly forested areas, compensation from Beijing goes solely to Chinese enterprises and local authorities to ensure that non-Tibetans employed in the State-owned logging companies continue to be paid salaries. This is confirmed by studies carried out by Chinese scientists commissioned by the China Council for International Cooperation on Environment and Development, chaired by the PRC's new Premier, Wen Jiabao.

The 2002 joint report by the State Development Planning Commission and the Asian Development Bank says that under current State Forestry Administration plans for Western China "the restoration of degraded lands would take more than 50 years. The rate of planting must be increased, particularly where erosion continues to cause costly damage".

Another aspect of the new reforestation policy - the grain for green approach and conversion of farmland to grassland and forest - has further victimised Tibetan farmers and nomads. Clear-cutting of forests is mostly irreversible on the plateau due to the high altitude and harsh climate, and reforestation is a huge challenge. Today reforestation is underway in regions which were not forestland traditionally but were either farmland or grassland. Logically, reforestation should take place in areas where clear-felling was inflicted over the past four decades.

At present reforestation seems to focus on fertile lower-lying valleys where the survival of plants and seedlings are certain. This causes tremendous pressure on Tibetan farmers and nomads to accept and endorse the reforestation and conversion of their farmland and grassland - eventually depriving them of their own land. China-Tibet Information Centre in Lhasa recently carried reports of resettlement of Tibetans from Kham's Gonjo County to other Tibetan areas in Nyingtri Prefecture as part of the reforestation of the upper reaches of Yangtze River. The resettlement will displace and deprive the Tibetan farmers of their basic subsistence.

Alongside the reforestation programme, farmers and nomads are being forced to plant shrubs and other species that grow quickly. But no longterm impact studies of planting new species have been carried out, nor of the threat to livelihoods of these farmers and nomads who find the introduced species useless either for food for themselves or as fodder for their livestock. The State promises grain and subsidies for a few years, at the end of which affected farmers and nomads are expected to fend for themselves.

Land Reclamation: The Vehicle to Escalate Chinese Settlement

The PRC has devised a special policy which it claims will encourage sustainable land use. This new piece of bureaucratic fine-tuning suggests "the lasting and inheritable practice of whoever reclaims the land shall be entitled to operate and get

benefit from it". The new policy covers "tree-planting and grass-growing on barren mountains, hillsides and beaches". This is a classic colonist way of looking at Tibet as a barren wasteland that needs to be developed and conquered. There are already cases of reclamation of common land - normally used by Tibetan farmers to graze their livestock - by outsiders for development purposes in Tibet.

Recent interviews of refugees from the "TAR" relate the hardships Tibetan farmers now experience in finding grazing for their livestock. China's reforestation and reclamation of land programmes have clear potential longterm benefits for Tibetans, provided that they do not lose land use rights and are fully empowered to become the permanent stewards of forests. For Tibetans to adjust their land use and forest use practices they will have to believe in the benefits of forestry-related activities.

The minimum benefit for Tibetans needs to be the guaranteed right of access to their forest resources to satisfy subsistence needs. But, furthermore, they need to be guaranteed direct benefits from Beijing's programme to reforest the huge tracts of Tibet that previous communist policy deforested.

Mineral Exploitation Industries: Marginalising Tibetans

The PRC's forward planning concentrates massive capital investment in largescale infrastructure projects to extract natural gas from Tibet, mine copper and chromite, and intensify exploitation of Tibetan salt lakes from which China takes the raw materials to make plastics, chemical fertiliser and magnesium. Chromite is much needed in the Mainland. The manager of General Motors, who is also a member of China's National People's Congress, predicts that within 10 years 500 million Chinese will buy a family car. (People's Daily 12 March 2003). If this consumerism does happen, China's need for Tibetan chromite will spiral and add hugely to the global load of greenhouse gases.

Areas of the Tibetan Plateau bordering Mainland China are already highly industrialised, with little attention paid to pollution control. In the arid Tsaidam Basin of Tibet's far northeast, oil fields pump two million tons of crude oil annually to nearby petro-chemical refineries. Asbestos mining, aluminium smelters, and lead and zinc mining are expanding under the patronage of the centre. Tibetans are powerless to appeal for pollution control equipment to be installed, because the factories are owned and run by the same people who are supposedly in charge of environmental protection.

China's current Tenth Five-Year Plan, and The 2020 Project, both outline further exploitation of Tibet's resources and envisage massive State investment in the transport and urban infrastructure needed to effectively access and convey those resources.

That Tibetan communities are powerless is evidenced by the case of the Tongren aluminium smelter, located in Rongwo Chu agricultural valley just north of Rebkong (Ch: Tongren) in Amdo. Due to the complete lack of pollution control equipment, toxic fluoride-laden smoke pours from this smelter, causing fluorosis - loss of teeth and stunted growth - in livestock, especially sheep, due to contaminated grass and the poor grain harvest. All appeals to the authorities have gone unanswered. Tongren County owns the smelter and the revenues from the aluminium processing pay the salaries of the local administration.

A 1996 Beijing-based US Embassy report on illegal gold mining in China - focussing particularly on Tibet's Amdo Province - suggests the connivance of local authorities with illegal miners in the rampant and uncontrolled gold mining on Amdo and Kham's fertile grasslands. The mining methods utilised by the miners leave the grasslands devastated and future mining unprofitable due to the short term and highly destructive techniques used. The region's nomads are powerless to prevent this ecologically devastating encroachment on their traditional grasslands.

In spite of introducing positive environmental legislation, China's capacity to regulate these laws is clearly undermanned and under-motivated. These limitations are compounded by the fact there is no co-ordination between the various ministries.

The Railway: Route For Resource Extraction

A transport infrastructure is one important factor in the upcoming economic development of China's western regions. However, there is debate among economists over whether a transport infrastructure triggers economic development or vice-versa. It is obvious that major investment in transport infrastructures are only part of the equation. Investment in social services matters, and we believe social infrastructure is the key to overall development of a society.

From an economist's point of view, Tibet's transport infrastructure - particularly the railway now being laid to Lhasa - is being implemented well ahead of demand in the hope that reduced transport costs will encourage business to move to Tibet.

Whether the Gormo-Lhasa line will in reality reduce transportation costs and raise per capita income potential in Tibet depends on its impact on market and supply-access conditions. In Tibet the market factor is woefully low and experts anticipate that there is no way this railway project can ever become commercially viable. But, as former President Jiang Zemin admitted to The New York Times during his American tour in August 2001, this railway project is a political investment.

Highways and railways are fundamental to China's ambitions to extract Tibetan resources to fuel distant Chinese cities and factories and to consolidate military control over the Tibetan region.

The first railway into Tibet, from China's Lanzhou to Gormo via Siling (Ch: Xining) enabled China to establish its first Tibet-based petro-chemical industrial base in arid Gormo, and to take at least 15 million tons of Tibetan oil and petroleum products to Lanzhou refineries by rail. Another 40 kms of special railway track was later laid to connect to China's nuclear weapons research and development facility in Haibei (Tib: Tsojang) Tibetan Autonomous Prefecture.

Now this route is being extended through from Gormo in the northeast to Tibet's capital, Lhasa at a cost to the State of US\$ 3.2 billion. This will facilitate China's exploitation of valued chromite deposits located on the route, and open up newly-identified Lhunpola oil basin in Chang Thang. China's passenger targets for the Lhasa railway, when it is completed in 2007, project two to three million domestic tourists a year, swamping sacred sites with photographers seeking exotic Tibetans to film. This will stimulate a tourist infrastructure - resorts, hotels, and luxury villas for China's new-rich - all of which will greatly increase the demand for electricity, water and other resources in Lhasa and the surrounding countryside. This will further strain the capacity of the land to feed the ever-growing population of Chinese settlers.

One of the few sections of China's white paper that is detailed and specific is on policies during the Lhasa railway construction to mitigate environmental damage. No independent scrutiny of the implementation of these policies is permitted.

The rail line is being built on high embankments for nearly all its 1,142-km length to keep the railbed permanently frozen. This requires massive earthworks, which, as the white paper admits, slice through migratory routes of endangered species, and across vulnerable wetlands that freeze and thaw at the surface while staying frozen at a deeper level.

For 50 years China has failed to construct any highway that withstands the alternate freezing and thawing, the heaving and slumping, of a unique zone of seasonally frozen earth. China does not understand the basic dynamics of Tibet's terrain. Yet now its railway project is displacing much more earth than any project in history.

How will China prevent the tunnelling, rock blasting and bulk earthmoving from triggering further degradation of a frigid rangeland that's vulnerable to disturbance? China's white paper explains: "The headwaters and wetlands along the railway line are to be specially protected to avoid desertification in the headwaters areas, shrinkage of wetlands, deterioration of grasslands and water pollution that might be caused by the construction. Attention is to be paid to the protection and regeneration of ground vegetation."

Unfortunately, the white paper doesn't spell out how this can be achieved, saying only: "the turf should be preserved and replanted in other places section by section,

to be moved back to cover the slopes". It also suggests: "grass seeds suitable for plateau areas should be carefully selected and planted with appropriate means of cultivation to restore as much as possible the ground vegetation that existed before the railway construction". What is not stated is whether Chinese scientists know which species of vegetation are suitable, can withstand transplanting, extreme cold, gales, blizzards and the grazing pressure of both wild and domestic animals.

Chinese scientific experiments with introducing grasses to Tibetan pastoral areas have so far produced poor results, requiring nomads to fence the sown grasses and later cut and transport the fodder to their animals, otherwise these delicate exotics easily die.

Whether China actually knows how to minimise and repair the damage currently underway as the railway crosses sensitive Tibetan wetlands is doubtful. China's white paper states that there are: "13 key technical problems now undergoing scientific research, of which half concern environmental protection". However, the precautionary principle that is at the core of all international biological conservation programmes states that before destructive interventions are begun, solutions and cures should already be established.

The rail route chosen by Beijing, as the Chinese white paper concedes, cuts through three officially-protected nature reserves of Hoh Xil, Chumarleb and Soga - all habitats of endangered antelope and gazelle. China's technical solution to the bisection of their migration routes is to build tunnels, in the hope that the herds - despite a schedule of eight trains each day in each direction - will pass beneath the busy tracks.

[PREV](#)

[NEXT](#)

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[Home](#) | [What's New](#) | [Reports](#) | [Wildlife](#) | [Geography](#) | [Development](#) | [Zone of Peace](#) | [Dalai Lama](#) | [Publications](#) | [Announcements](#) | [Links](#) | [Site Map](#)

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