

## THE RIGHT TO FOOD AND ACCESS TO LAND ON THE TIBETAN PLATEAU

A briefing presented by Free Tibet to the United Nations Special Rapporteur on the Right to Food on the occasion of his visit to China, December, 2010

### SUMMARY

According to recent archaeological fieldwork, the Tibetan Plateau has been used extensively by pastoral nomads for close to 9,000 years so there should be little reason to expect that, in the 21<sup>st</sup> century, such land use would be brought to an end.

But Tibetan nomadic pastoralists are now required by Chinese state directives to remove both their herds and themselves from large areas of grazing land, with little prospect of ever resuming their mobile mode of production. Under an official policy of *tuimu huancao*, “removing animals to grow grass”, hundreds of thousands of nomads have already been removed, especially in the area where three great rivers: the Yellow, Yangtze and Mekong, rise in glacier melt on the Tibetan Plateau.

In the name of scientific rationality, watershed protection and climate change mitigation, two million and more Tibetan pastoral nomads are now being rapidly removed from their pastures, and compulsorily resettled in high-density concrete block housing utterly lacking in amenities to equip nomads for new livelihoods as urban fringe dwellers.

The pastoral nomads who have already been removed have had their land rights documents nullified. They are now landless, without means of subsistence, untrained in modern skills essential for entry into the modern workforce.

Landlessness and loss of livelihood and production in many areas, such as the prefectures of Yushu and Golok (in Chinese Qinghai Yushu and Guolu), are now a direct cause of immiserisation and despair, as there is nothing the formerly independent nomadic producers are now equipped to do to sustain their lives.

The policy of *tuimu huancao* is presented as the solution to the problem of rangeland degradation and hence the threat of erosion of the upper watershed of China's greatest rivers.

International best practice where rangelands are degrading is to first work with local pastoralist communities to provide them with resources and training to rehabilitate degraded areas, by providing them with suitable knowledge, seeds and equipment to establish sown pasture using indigenous varieties suited, in this case, to the cold climate of Tibet. Removal of both herd and nomads should be the very last resort, after other forms of co-management have been tried and have failed. It is a serious policy failure to turn to enclosure as the first substantial intervention to deal with what

China calls “the contradiction between grass and animals.”

The inexorable pressure of state policies over decades: to reduce herd size, reduce land lease area or cancel leases altogether, restrictions on family size; sudden natural disasters and worsening erosion of grassland soils have all pushed Tibetan nomads off the land, towards casual money earning opportunities somewhere else.

After a natural disaster - a blizzard, cold snap or earthquake - the poor are often reduced to beggary, again forcing people off the land and into towns. This may be temporary, but if debts have accumulated - exacerbated by bank loans for nomads to build new permanent homes - nomads sometimes have little choice but to accept the standing offer from the state to buy out their remaining herd, and also pay a modest amount to cancel their grazing land lease. There is no way back because the state, having cancelled a land lease, never restores it.

How many of the two million pastoralists of the Tibetan Plateau have already been driven to abandon both herds and land is impossible to quantify, in the absence of independent monitoring and the impossibility of nomads organising to make their voices heard. Hundreds of thousands of people are known to have been displaced and the number is increasing rapidly.

Nomads cannot and therefore do not give informed consent to resettlement as they are not consulted and in some cases those who have protested official policy have been arrested and sentenced to long jail terms.

## **HUMAN RIGHTS BREACHES**

**The state-driven enclosure movement is now accelerating. All over the vast Tibetan Plateau, an area comparable to Western Europe, both herds and nomads are being compulsorily removed, while being praised in official media as “ecological migrants.”**

**This is one of the greatest expulsions of a population from their lands in history, comparable in many ways to the 19<sup>th</sup> century European settler-driven removal of Australian Aborigines, American and Canadian Indians from their lands and into vestigial reserves. This profoundly mistaken and entirely unnecessary policy is a breach of collective social and economic rights as well as individual rights to freedom of movement and association. It cuts off at the root the livelihoods, productive economy and food self-sufficiency of those who made the Tibetan Plateau habitable.**

This is state failure on an extraordinary scale. It represents a reversal of direction by a state that throughout the 1980s and 1990s dismantled the first wave of statist intervention - the disastrous communisation of the nomads into disempowering work units utterly under the control of revolutionary cadres with no understanding of the natural limits of the rangelands. After the failure of the communes, the Chinese state returned herds to their owners and gradually issued long term land rights certificates to each nomadic family, guaranteeing secure access to grazing land. Now these land rights have been torn up, the certificates nullified, herds removed and the nomads

themselves compelled to leave pastures they have managed both sustainably and productively for the past 9,000 years.

In recent decades the rangelands have experienced alarming degradation, erosion, even such loss of soil as to strip the land back to bare rock exposed to the gales, blizzards and temperature extremes typical of the planet's third pole. The Chinese state, backed by Chinese scientific research reports, insists that the nomads themselves are primarily responsible for this degradation; they accuse the nomads of greedily and ignorantly overstocking the pastures, and of failing to kill a higher proportion of their yak, sheep and goat herds annually. China's other explanation for the degradation of the rangelands, including the area where the Yellow, Yangtze and Mekong Rivers all rise in Tibetan rangelands, is global climate change, for which China blames the older industrialised countries.

To the Chinese state, the *tuimu huancao* policy is necessary, rational, scientific response to climate change and nomadic backwardness. It is now extending far beyond the river source region, the initial four prefectures that constitute most of the rangelands of Qinghai province, to the entire plateau. At the current accelerating rate of enclosure, almost all of Tibet's two million nomads will have become displaced persons by 2013.

This is a major breach of the collective rights of whole communities, clans and nomadic tribes to their economic and social rights to livelihood, access to land and the means of production.

This punitive approach also contradicts China's own "Outlines of National Food Security Development Plan" for the years to 2020, which emphasises the need for state investment in technology to make primary producers more productive, rather than constricting them in a myriad of regulations, all of which reduce productivity.

## **CHINA'S MANDATORY OBLIGATIONS UNDER THE U.N. CONVENTION ON BIODIVERSITY**

China ratified the UN Convention on Biodiversity (CBD) in 1993 and is thus obligated to enact complementary legislation and then implement it, to fulfil its CBD responsibilities.

Sanjiangyuan, the Three-Rivers-Source Protected Area, is officially gazetted by the government of China as a high level officially Protected Area, thus incurring the mandatory obligation under the UN Convention on Biodiversity's Element 2 Program of Work on Protected Areas (PoWPA), dealing specifically with governance of protected areas, to ensure that traditional owners and land users in protected areas are not excluded but become participants in the work of protection.

The Convention on Biodiversity has many sections (notably Article 8 (j)) emphasising the importance of indigenous communities as guarantors and protectors of biodiversity and the ongoing sustainability of entire ecosystems, based on evidence from around the world, showing that the most effective way of maintaining ecosystem services to downstream users, and the viability of biomes, and the conservation of endangered species, is to not only allow customary land owners continuing access to land, but to support their efforts at rehabilitation of degraded areas.

The Convention on Biodiversity specifies not only governance but also equity and participation as the key issues all signatory parties must address, and report on, in certifying their compliance with provisions of the Convention. Equity and participation require inclusion of communities long resident inside declared Protected Areas, respect for their collective economic and social rights to livelihoods compatible with the objectives of declaring areas protected.

China's 2008 official response to the requirement that it report to the CBD on implementation states: "Enhancing public participation and environmental awareness: The Chinese government strives to create opportunities for the public to participate in biodiversity conservation. The Environmental Impact Assessment Law requires public involvement in EIA and that public consultations or hearings will be held or other approaches used for assessing environmental impacts of planning or construction projects, opinions from related authorities, experts and the public will be sought on EIA reports. The Provisional Procedures for Public Involvement in Environmental Impact Assessment has detailed the scope, procedure, organization and other aspects of public involvement in environmental impact assessment."

In the overwhelmingly Tibetan areas constituting the Three-Rivers-Source Protected Area, none of these procedures have been followed. No environmental impact assessment demonstrating the necessity of removing herds and herders has been officially issued, nor has there been public debate, or popular participation in the policy process. Nomads who have protested official policy have been arrested and in some cases sentenced to long jail terms. The nomads are in no way free to organise themselves into non-government organisations (NGOs), or community service organisations (CSOs) or to articulate their concerns, or contest official policy.

What does China officially define (Fourth National Report 2008, 27) as "a biodiversity conservation and management system with Chinese characteristics"?

Officially, China says: "While getting involved in biodiversity conservation, local communities also enjoyed much better working and living conditions. The Project of Returning Farmland to Forest covers more than 32 million farmer households and 124 million farmers in 25 provinces, autonomous regions and municipalities. By the end of 2006, each household whose farmland was restored into forest received 3,500 yuan of subsidies on the average." On the ground, the programme of planting trees on marginal, sloping dryland farms that should never have been ploughed, demands that farmers now cultivate trees that have no economic utility even in the long term, in return for which they are given bare subsistence rations of 3,500 yuan per household, well below the poverty line. The Project of Returning Farmland to Forest is a precursor and model for the Removing Animals and Growing Grass program that expels nomads and is meant to compensate for their loss of food security by providing subsistence rations, again well below the poverty line. (China Fourth National Report to the CBD, 29, <http://www.cbd.int/doc/world/cn/cn-nr-04-en.pdf>).

China says: "Through various forms of promotion, education and participatory activities, local governments and related departments publicized scientific knowledge and demonstrated achievements of biodiversity conservation to make people aware of the importance and urgency of biodiversity conservation and enhance the extent of and capability for public participation." This is a one-way process of official announcements with no effective dialogue, negotiation or community participation in the policy process, especially in Tibetan areas where popular participation is routinely criminalised, as "splittism", a serious crime punishable by heavy penalties including torture and long prison sentences.

China's vague promises on participation notwithstanding, when it comes to actual performance in compliance with provisions of the CBD, China unequivocally declares nomad exclusion as a biodiversity conservation success: "Conserving grassland biodiversity: The MOA [Ministry of Agriculture] strived to restore grassland vegetation and increase grassland productivity by implementing the Project of Returning Grazing Land to Grassland and measures such as grazing ban, grazing land non-use period, rotational grazing and accommodation of carrying capacity. These projects and measures have boosted more balanced development between grassland ecology and animal husbandry." (Fourth Report, 34)

In 2007, China submitted to the CBD compliance documentation on the specific question of participation: In response to the CBD questionnaire asking if consultations have been undertaken, involving "local stakeholders", China's official response was: "Yes, all protected area's biodiversity conservation targets were based on consultation involving protected area functionaries, local stakeholders and researchers." This would be news to the hundreds of thousands of displaced Tibetan pastoral nomads.

## **CHARTING CHINESE POLICY SHIFTS AND THEIR CONSEQUENCES**

Despite having little historic experience of active rangeland management, China has in recent years intervened dramatically in the livelihoods of the two million Tibetan nomads who live in five Chinese provinces, occupying almost one quarter of China's area. China's interventions are a sharp reversal of policy which, throughout the 1980s and 1990s, encouraged nomads to manage both their family herds and family land on a long term sustainable basis, with state guarantees of long-term leasehold land rights to pastureland.

China imposed a new doctrine of *force majeure*, after decades without consultation or development assistance to nomad communities. Nomads attempted to cope with accelerating degradation initiated by past policy failures, originating at a time when revolutionary communes on the grasslands stripped nomads of all managerial agency. China's productivist insistence on producing more meat led, on consistent Chinese official statistics for all relevant provinces, to great increases in herd size, far beyond the carrying capacity consistent with traditional practice. The two decades of communisation have had disastrous consequences, setting off a chain of degradation, primarily erosion of topsoil caused by dieback of the hardy grasses and sedges of the rangelands, exposing soil to blizzards and gales, which strips soil back to bare rock. Once eroded, it may take many centuries, even with careful and well-financed interventions, to return organic matter and build up soil, especially close to the snow line. Already, decades of official indifference, inaction and denial of past policy failure has left degradation to continue unchecked. Now, in a sharp policy reversal, those who lost most - the nomads - are officially blamed for degradation and made to pay the price of becoming internally displaced persons with no say in their disposal by state power.

Official policy is that "there is a contradiction between grass and animals"; that the displaced nomads are "ecological migrants" who have voluntarily relinquished their customary mode of production based on access to and extensive use of land for the

good of the nation and downstream users of China's rivers. The ground truth is that the pastoral nomads have no say, are not permitted to organise themselves in any way or to articulate their concerns in public at all. They are officially said to be grateful to have a chance to start a completely new life, with their subsistence guaranteed by state rations during resettlement until they find employment on the fringes of the modern economy.

Chinese leaders have long depicted China as full or overfull of people, and Tibet as empty, suitable for more intensive exploitation. It has been a frustration for China's leaders that the "promise" of Tibet to produce more remains unfulfilled, in part because the extensive land users, the nomads, were actually as productive as natural resources permit. The failure to commercialise meat production is also because pastoral nomadism requires vigorous risk management in an unpredictable climate, and one risk management strategy practiced by nomads is to maintain herd size and limit slaughter rates, not only for religious reasons but as insurance against natural disaster and to ensure breeding animals will be available to rebuild herds even after a blizzard or other disaster.

## **THE AGRO-ECOLOGICAL BASELINE OF SUSTAINABLE HUMAN LAND USE IN TIBET**

However, the nomads, international scientists and an increasing number of Chinese scientists have a very different picture of how this tragedy came about. Pastoral nomadism, far from being a necessity imposed on the Tibetans by a harsh climate, was a deliberate choice, in favour of mobility, by farmers who discovered they could let their yaks onto the grasslands to graze freely, with no need for fences, as the most highly productive strategy. The partnership of humans and yaks made possible the human occupation of the entire Tibetan Plateau, an extensive use of land that made use of all landscapes below the snow line.

An entire civilisation was built on mobile pastoral nomadism, including a sophisticated Buddhist culture which accompanied the nomad encampments, settled disputes among nomads over grazing rights, built great monasteries with nomadic devotional labour, and provided monks and nuns recruited from nomadic families. To this day, many of the Tibetan lamas famous globally for their capacity to meaningfully change modern minds were born in remote nomadic families and grew up in nomadic communities.

Tibet's pastoral nomads developed deep understanding of grassland dynamics and veterinary knowledge which was maintained intergenerationally in many detailed texts. Recent scientific research confirms that customary nomadic rangeland management practices, including steady and even intensive seasonal grazing pressure actually maintains a wider biodiversity of indigenous species of grasses, forbs and medicinally useful plants, than removing all the animals. Far from being selfish, stupid or unaware of the consequences of grazing, as China supposes, the nomads, as natural resource managers over millennia, created a curated landscape that was rich in biodiversity, sustained huge herds of wild antelope mingling freely across an unfenced land with domestic herds, with very little over use. The pastoral nomadism of Tibet was both sustainable and productive, with outbreaks of

destructive rodent plagues being rare, little degradation of pasture, and a balance of forest and pasture land.

Tibet's nomads have always seen themselves as enjoying a bounteous life provided for them by what grows naturally, as long as they maintain mobility and do not overuse resources by staying too long in one place. To see the nomadic life as threadbare subsistence, at the mercy of a harsh and unpredictable climate, in a land of snow, ice and blizzards, eking bare survival in the face of enormous risks, is an outsider's perception common to Chinese and westerners. The nomads themselves describe their lives as intensely busy during the short growing season, and filled with leisure, storytelling, pilgrimage, trading, spinning and weaving, religious practice, socialising and relaxation during the long cold months. It is a preferred life way, not an ecologically determined necessity.

## **TIBETAN NOMADIC PASTORALIST BUSINESS ENTERPRISES AS THE CORE OF THE TIBETAN ECONOMY**

Historically pastoral nomadism, as practised across the entire Tibetan plateau, was the heart of the Tibetan economy, producing not only foods and fibres essential to sustaining life and human use of the world's third pole, but also the surpluses that make for a trading economy integrated into the world economy.

Tibetan pastoral nomadism produced large surpluses, primarily of butter and wool, which were the physical basis of the monastic institutions that maintained a sophisticated, philosophically literate civilisation. The seasonal nomadic surpluses, whether donated to monasteries or traded afar by nomadic caravans, both created wealth and redistributed it according to nomadic values, which rank generosity above accumulation. In addition to the autumn surpluses of wool, hides, meat, cheese and butter, the nomadic clans regularly gathered salt from the salt lake beds and then took their tradable goods great distances to Indian and Chinese markets, which in turn transhipped wool to global destinations such as the woollen mills of Britain and the US, in the years before revolutionary China sealed Tibet off from the world.

The pastoral nomads of Tibet were entrepreneurs running businesses. Like any entrepreneur, they took calculated risks in the hope of making profit, both from the demand for their own products in distant markets, and from the arbitrage opportunities presented by importing tea and silk from China, cotton from India. The profits they made were often considerable, and were routinely donated for the welfare of all sentient beings to nearby monasteries, rather than retained as capital for further expansion.

China has never recognised Tibetan pastoral nomads as entrepreneurs operating businesses in groups of pooled family herds, with collective risk management procedures. Far from acknowledging pastoral nomadism as an industry operated by independent entrepreneurs, China classifies all pastoral nomads simply as rural labourers - a lumpen rural proletariat of unskilled hands who should be available for work anywhere. In China's otherwise comprehensive statistics, the entire pastoral economy is largely absent, appearing nowhere in the annual provincial statistical yearbook chapters on employment, which restricts itself to monetised employment in

urban centres, in state enterprises and regulated semi-state and non-state enterprises.

## 9-1 农村和农业基本情况

### BASIC CONDITIONS OF RURAL AND AGRICULTURE

项目	Item	2000	2007	2008
乡村户数	(万户) Number of Rural Households (10000 units)	37.83	42.78	44.09
乡村劳动力	(万人) Number of Rural Laborers (10000 persons)	100.83	112.42	115.07
男	Male	50.80	57.72	59.40
女	Female	50.03	54.70	55.67
按行业分乡村劳动力	(万人) Number of Rural Laborers by Sector (10000 persons)	100.83	112.42	115.07
农林牧渔业	Farming, Forestry, Animal Husbandry & Fishery	90.12	87.67	88.28

Pastoral nomadism does appear in a table showing the total number of rural labourers in Tibet Autonomous Region for the year 2008 (above), without differentiating farmers from pastoral nomads.

Their economic contribution is identified as:

农林牧渔业总产值	(万元) Gross Output of Farming, Forestry, Animal Husbandry and Fishery (10000 yuan)	512185	798309	884518
#农业	Farming	263649	359382	396962
牧业	Animal Husbandry	235282	349108	389630

On these figures, the 883,000 farmers and pastoralists of Tibet Autonomous Region in 2008 created 8.845bn yuan of output (before counting costs of production), or 10,000 yuan per "labourer", a considerable amount, even though their actual consumption of their own pastoral products hardly suggests they can afford to eat what they make.

Although population has grown, the number of pastoralists and farmers has remained almost constant over three decades.

## Degradation

Anthropologist Emily Yen writes: "Evidence to date suggests that the ecological benefits [of *tuimu huancao*] are questionable while the social costs are high. For *tuimu huancao* and ecological migration to improve grassland degradation in any given area, several conditions must hold true: grasslands must be degraded; overgrazing must be a primary cause of the problem; and removal of grazing must be able to move the ecosystem out of its undesirable state. A number of scientists have questioned sweeping statements about pervasive degradation across the

plateau. Indeed, some of the data on which commonly cited statistics about the extent of degradation and the rate at which it is increasing is based, appear to be from undocumented and methodologically dubious surveys.

“Recent attempts to more rigorously quantify the extent of degradation have had conflicting results. Thus, while overgrazing in the past or present is undoubtedly a key driver of vegetation change in some areas, other factors such as climate change – and interactions between multiple factors – may also play important roles. To date, few rigorous studies have been conducted to investigate these multiple interacting factors, or the extent to which ecosystems can transition to other states under conditions imposed by various interventions. Much work remains to be done in demonstrating the ecological effects of grazing removal in areas where it is being implemented.

“Furthermore, there are reasons to believe that *tuimu huancao* in its various forms will not be a win-win solution for both rangeland health and climate-change adaptation. Large-scale boundary fencing, together with use-rights privatisation, reduces mobility across the landscape. (Although small-scale fencing for reserve pasture or fodder production is generally welcome). This could potentially increase vulnerability to devastating snowstorms, which climate-change models predict will become more frequent and severe. In addition, such fencing can have negative effects for migratory wildlife, as well as for local livelihoods, as a result of the uneven spatial distribution of rangeland resources.

“A study conducted by Chinese scientists in Sichuan’s Ruo’ergai County found that the number of herders facing lack of water availability tripled after household rangeland allocation. Furthermore, recent ecological evidence from warming and grazing experiments on the eastern Tibetan plateau suggests that the presence of moderate grazing actually helps control the expected effects of global warming on reduction of biodiversity and rangeland quality. Experimental warming leads to decreased species richness, including of medicinal plants, as well as decreased biomass, including palatable biomass. However, these effects are dampened in the presence of grazing. These results suggest *tuimu huancao* may not be adaptive for climate change.”

## **GRASSLAND GROUND TRUTHS**

The *tuimu huancao* policy - close pastures to grow more grass - is fundamentally based on a crude Marxist dialectic. In a phrase used often: there is a contradiction between grass and animals. The more animals, the less grass; the fewer animals, the more grass. If China is to conserve its upper watersheds and reverse degradation and desertification, more grass must grow, thus the state believes herds and herders must be removed, initially on a temporary basis, and then permanently.

To say there is a contradiction between grass and animals is a grotesque oversimplification. Recent international scientific research validates what Tibetan nomads have known all along: the hardy grasses of the vast pasture lands of Tibet can not only withstand seasonal heavy grazing pressure but actually maintain maximum biodiversity only if grazed. Once grazing is removed, the height of biomass above ground does increase, but biodiversity decreases, toxic invasive weeds multiply, and medicinal plants often disappear. A grazed grassland, managed skilfully,

is the most productive and sustainable grassland. This is not a naive romantic urban fantasy wishfully supposing nomads must live in harmony with nature. Scientific fieldwork conducted by scientists from the universities of Arizona, Montana, Queensland and Qinghai in recent years confirms the sustainability of Tibetan nomadic pastoralism.

A fundamental fact of the Tibetan grasslands, invisible to Chinese eyes, is that the grasses, sedges and forbs usually keep most of their biomass below the ground, protecting them from snow, ice, howling gales and grazing teeth. This is not your usual grassland of temperate climes, and standard prescriptions, formulaic stocking rates and carrying capacity numbers just don't apply.

Recently, Chinese grassland scientists have started to talk to nomads, and to learn to observe and listen. Gradually, Chinese scientific reports acknowledge the skilful, productive and sustainable land management strategies of Tibet's pastoral nomads; but state policy is set. The *tuimu huancao* policy names the above ground growth of grass biomass as the sole objective, to which all else must comply. This entails abrogation of the long-term land lease certificates issued to nomadic families in the 1980s and 1990s, in every way analogous to the land rights given to Chinese farmers to convince rural producers that the land confiscations of the 1950s can never happen again. In a state where absolute title to rural land is not available to rural dwellers, these long term leasehold certificates were proclaimed as being as good as a title deed. They could be used as collateral for raising bank loans, since they entailed a state guarantee intended to persuade farmers to care for land that was in every way theirs. In nomadic areas of Tibet, the awarding of such certificates happened more slowly than in most of China but by the early 1990s all nomadic families had their certificate, which named the family members entitled to use the specified land.

What seemed at the time a welcome retreat by the state, entrusting active land management to responsible nomad households, turned out to be a time bomb. Problems quickly surfaced. First, the land rights usually covered only winter grazing areas, not the upper alpine pastures that are essential to enabling herds depleted by winter starvation to rapidly gain weight grazing on mountain meadow. The mobility inherent in nomadism as an integrated system of animal rearing was compromised. Second, the nomad families were strongly encouraged to make their winter quarters into a permanent home, and to fence their allotted land. Construction of a permanent home and fencing both require capital outlay, though nomads have had only limited access to cash income, since they consider their true wealth to be animals on the hoof, not animals sold for slaughter. In some areas, central poverty alleviation funds partly financed fence and house construction but in many areas nomads report that they were required to take loans from China's state owned policy banks, which led to great indebtedness and great difficulty in servicing loans. Poverty was the result, as herd sizes have relentlessly decreased to bare subsistence levels, a fact verified by recent research conducted by Leipzig University. A nomadic family interviewed in November 2010 said: "The local officials promised us poverty alleviation funding, and it sounded like a great bird would come from the sky. But when it got closer, it seemed like just an ordinary bird, and by the time it landed, it was no bigger than a bug."

Third, the long term land lease certificates identified, by name, the family members at the time of issue, and were never subsequently amended to accommodate natural

increase, whether by birth or marriage. This bureaucratic rigidity, so unlike the periodic re-adjustment of pasture allocation undertaken by the traditional nomadic *rukor* tent-circle, had severe consequences later. Officials in charge of administering this policy, chiefly the Animal Husbandry Bureaus at provincial level and lower, said explicitly that the refusal to enter new family names onto land certificates would teach the nomads to restrict family size; and the refusal to re-allocate land as circumstances change in a highly changeably alpine climate that is prone to natural disasters, would teach the nomads to restrict herd size.

These statist interventions proved disastrous. The official failure to engage with nomads in any meaningful programme of rural extension, breeding programmes or basic education in numeracy and literacy, meant state policies remained incomprehensible to the nomads, and the nomads remained a lumpen mass of backwardness in official eyes. A policy intended to incentivise nomads to care for land that was effectively theirs was experienced as enclosure, which the nomads had to pay for, and which greatly restricts the mobility on which pastoral systems worldwide depend.

The result was further degradation of pasture since the nomads had largely lost their mobility; in official eyes this further proved the nomads are to blame for degradation. One official response was to renew efforts to persuade nomads to kill more animals, increasing the slaughter rate to the officially recommended level of one half of all sheep each year and one quarter of all yaks. This too the nomads resisted, in part because of a Buddhist repugnance at raising animals solely and specifically for slaughter, but also because, in a high-risk environment, the herd is the nomad's only wealth, and after a natural disaster the bigger the surviving herd, the faster the recovery. Experience in other nomadic economies, notably Mongolia, shows that nomads can be persuaded to reduce herd size if they can first be persuaded that the risks inherent in pastoral nomadism are shared by the state. This is achieved by setting up an inexpensive livestock insurance program which pays nomads to restock and recover after a major disaster. China never attempted in any way to assist the Tibetan nomads to lessen risk, or to invest in rehabilitating pasture.

## **CASE STUDY: THE RECENTLY REMOVED NOMADS OF YUNNAN PROVINCE**

As recently as November 2010, China announced it had succeeded in sedentarising 6,000 Tibetan pastoral nomads far from the Three-Rivers-Source region, in the Tibetan prefecture of Yunnan province (Dechen in Tibetan, Deqen or Diqing in Chinese). The China Tibet Online website announced: "6,000 herdsman say goodbye to nomadism in Deqen. Shangri-la County of Deqen Tibetan Autonomous Prefecture, Yunnan Province has helped more than 1,300 families nomadic herders left nomadic life and moved into comfortable, spacious houses. This year, a total of 111,780,900 yuan will be invested on construction projects to help 6,000 nomadic herders of 1,300 families move into new houses." (28 Nov 2010)

In this Tibetan upland portion of Yunnan, pastoral nomadism has been practiced for centuries, and in recent years, villagers democratically agreed on formal rules ensuring that there would be no overgrazing, and that all available pastures would be used skilfully, in seasonal rotation. In translation, this is the exact wording of that village-level democratic process: "To people of all sectors of society in Dimaluo:

Based on the leadership of the Village Committee, for the good of animal husbandry in our Dimaluo, for the health of the future Dimaluo villagers' living environment, for the sustainable development of the livestock industry in Dimaluo, on the basis of the Village Customary Regulations (in Chinese *cungui minyue*) and to strengthen the management system of rangelands that are going to degrade, we ask people of all sectors to cooperate. Let us create a beautiful future animal husbandry together.

“The following is the management system for Xinke upland rangeland:

-Before the 10<sup>th</sup> of May every year the path up to Xinke must be made passable. Every household that herds in Xinke rangeland must take part in repairing the road. Those who, after being informed, do not take part in repairing the road, will be fined.

-Before 10<sup>th</sup> of May each year it is forbidden for the livestock of any household in any hamlet to graze in Xinke rangeland. Infringers will be fined.....”

(Andreas Wilkes, *The Creation of Community-Managed Rangeland Institutions in Dimaluo: three cases of community-based natural resource management*, Centre for Biodiversity and Indigenous Knowledge, Kunming, Community Livelihoods Working Paper #11, 2005, p10)

By these simple rules, the three villages democratically decided how to ensure that the upper summer pastures are used, taking pressure off lower pasture land, and that herds are not moved up until spring grass growth is vigorous. Tibetan pastoralists have shown their capacity to translate customary oral decision-making by the traditional tent-circle into the formal and written processes of Chinese legal regulations. Yet these arrangements have now been nullified by the supervision of state power, herding the herders off their land and into block houses below their pasture lands with meagre prospects for the future. A particular irony is that in Yunnan this is happening just above the zone designated officially by China as the actual historic Shangri-la, the romantic paradise on earth invented by the English novelist James Hilton in 1935. While tourists enjoy being photographed seated on a docile yak, the real nomads are now shut out of their land and livelihoods.

## **RECOMMENDATIONS**

- **China should halt forced nomadic resettlement programmes.**
- **China should halt implementation of its *tuimu huancao* policy of removing animals to grow grass, at least until there is scientific consensus that such a programme is necessary. A world scientific conference should be convened to clarify whether customary and contemporary Tibetan pastoral nomadic practices are causes of rangeland degradation, and whether grassland rehabilitation can be achieved with active nomadic participation rather than by exclusion.**
- China should allow resettled nomads an option of return to their lands, with official assistance to train pastoralists in natural resource management, protected area management, and sustainable land use.
- China should provide pastoral nomads with guaranteed land rights comparable to those issued to China's peasant farmers in the 1980s, including official guarantees that land will not be arbitrarily repossessed by the state, for decades to come.
- China should update its rangeland management policy to world standards, inviting best practitioners from rangelands around the world to establish projects aimed at co-management of natural resources, to introduce new, inclusive processes of flood control, climate change mitigation, carbon sequestration and sustainable grazing, rather than exclusion.
- China should extend basic income support, health insurance and a social safety net to rural Tibetan areas, enabling pastoralists to repay debts, restock pastures and resume seasonal herding. This is in line with China's policies of increasing domestic demand and buying power, lessening reliance on exports, and increasing incomes of the poor.
- China should invite scientists from many countries to independently investigate how well central policies actually work in practice on the Tibetan plateau. This includes the sloping land conversion programme, the grain-to-green programme, the *tuimu huancao* removing animals to grow grass programme and other land use programmes that restrict nomadic mobility.
- China should implement policies announced in 2003, which stated that nomads and herds would be removed for three or five years, to let more grass grow, and then be allowed to return to their pastures.

- China should design all policies for pastoral areas according to the overall principle that traditional pastoral nomadism is sustainable because it is mobile, making extensive use of all pasture. All policies should be designed to ensure seasonal access to both summer alpine meadow and winter lowland pasture.
- China should suspend programmes requiring pastoral nomads to build (and finance the building of) barns, overwintering animal enclosures, fenced hay paddocks and hay storage, until consultation with nomads, as equals, establishes whether such measures are workable, given the intense pressure on nomads to maximise food and fibre production in the short growing season.
- China should implement its food security policy and invest in organic agro-ecological production of food and fibre from the Tibetan Plateau, including investment in employing pastoralists to sow native grass seeds and rehabilitate eroded areas.
- China should fulfil its obligations under the Convention on Biodiversity to report in detail on how it promotes co-management of pastoral lands on the Tibetan Plateau.
- China should enforce decrees forbidding the mining of gold and other minerals by unregulated gold rush artisanal operators, and repair the damaged rangelands resulting from gold rushes, highway and railway construction and fencing that exposes alpine soils to erosive winds and blizzards.
- China should cancel the indebtedness of pastoralists and resettled pastoralists, where such loans are non-performing, and the debtors have little realistic prospect of repaying.

## **ANNEXE: MULTIPLE POLICY FAILURES AND THE ORIGINS OF THE PRESENT CRISIS**

### **RELATIONS BETWEEN TIBETAN AGRO-ECOLOGICAL PASTORALISTS AND THE CHINESE STATE**

When China's armies “liberated” Tibet in the 1950s it was the nomads who led the resistance, and the nomads who suffered most as 20<sup>th</sup> century aerial warfare, making no distinction between combatants and civilians, was unleashed from above. Only in recent years has the extreme violence of this “liberation” been documented by Chinese historians using county level yearbooks that record the many battles and the numbers killed, corroborating the oral accounts given by nomads. Close to one million yaks were requisitioned by Chinese armies as pack animals to get artillery and heavy equipment across plateaus and over high passes for the next battle.

The nomadic resistance to “liberation” set the stage for subsequent relations between a newly proclaimed revolutionary nation-state on an urgent mission to surpass the UK in steel production within a few years; and the nomads occupying a quarter of China's landmass. China has little history of administering rangelands, no tradition of grassland governance on which to draw. The nomads were quickly categorised as “green brains”, feudal serfs. Their enduring loyalty to lamas and landlords proved they were unable to embrace, as beneficial to them, China's revolutionary zeal for liquidating the landlords. The nomads were herded into communes, in which cadres brought from afar had absolute power, far greater than any powers landlords had ever exercised. The nomads utterly lost control of their land, their herds, personal possessions and even their children; given rations according to how hard they worked. The great famine of 1959 to 1961, a state failure that on the basis of the latest research cost 45 million lives across China, further devastated grassland communes, which were reduced to eating bark, roots and grass themselves. At the same time, at China's command, herd size steadily grew to unsustainable levels, and the chain of grassland degradation began. Chinese soldiers garrisoned in each Tibetan town, took to the grasslands in their jeeps, indiscriminately shooting at migrating herds of antelope.

China's prime objective was productivity and on a map, from afar, the great grasslands looked almost empty, under-utilised, producing wool, dairy products and meat sufficient to guarantee food security for all Tibetans, but with limited surpluses. To protein deficient Chinese from the lowlands, it seemed obvious Tibet could be made to produce more meat, but the nomads stubbornly, whenever possible, resisted slaughtering animals.

## 9-24 年末牲畜存栏情况

## NUMBER OF LIVESTOCK IN YEAR-END

单位: 万头(只)

年份 Year	地区 Region	牲畜总 头数 Number of Animal	大牲畜 Large Animal		羊 Sheep and Goat	
			#牛 Cattle and Buffalo	#绵羊 Sheep	#山羊	#绵羊
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Source: Tibet Autonomous Region Statistical Yearbook for 2009

The communes failed in every way. Thousands of Tibetans died doing heavy labour to cut sod and make fences from piled turf, exposing the soil to blizzards and gales while doing little to improve herd quality by fencing calves from their mothers. While herd size grew steadily, in all areas of the Tibetan Plateau, from the late 1950s up to 1980, on Chinese statistics, meat production barely rose, degradation intensified, the weight of adult yaks declined, alien invasive weeds, some of them toxic to livestock, started appearing in the grasslands, and the first outbreaks of burrowing grassland rodents in plague proportions occurred. The communes were finally abandoned in the late 1970s and the nomads quietly took their animals back.

As soon as nomads regained some control over their own lives, the number of sheep quickly dropped by 20 to 25 per cent, right across the Tibetan Plateau, as is recorded in China's statistical yearbooks for all five provinces into which the Tibetan Plateau

has been fragmented by official decree. But the degradation, erosion, soil loss, landslips and permafrost thaw slumping of previously frozen earth continued unstoppably.

China's bold switch from communisation to an increasingly capitalist model, with each household individually responsible for their herds, brought onto the grasslands a new Chinese mental map, in which the herders became the cause of degradation. Nomads all behaved, it seemed, as model competitors with no ownership of land they treated as a commons, exploiting the commons mercilessly, and way beyond its rational carrying capacity. In Chinese eyes the nomads were transformed from feudal slaves into proto-capitalists greedily exploiting grassland they did not care for since they did not own it: a classic "tragedy of the commons." The unstated assumption inherent in that model is *homo economicus*, the modern individual who selfishly exploits whatever resources are freely available, capturing maximum economic return while externalising costs to the environment.

Had Chinese social scientists, grassland scientists or veterinarians asked nomads about their short and long term rangeland management strategies, they would have quickly discovered that the nomads manage the risks inherent in the cold climate and high altitude of Tibet with great care and forethought, making seasonal decisions as to when to rotate herds off pastures and onto new ones, using a group decision making process, the *rukor*, or tent-circle. The *rukor* is neither as huge and impersonal as the communes imposed on the nomads in 1960s and 1970s, nor as individualised as the "household responsibility system" that China introduced in the 1980s. The *rukor* brings together the most experienced herders of ten to fifty families, depending on whether the district is suited to large pooled herds, or smaller separate herds in more rugged terrain.

None of this was known to Chinese decision-makers because they never talked to nomads, continuing to regard them as primitive, irrational and backward. Even when an American delegation of grassland scientists in 1992 pointedly contrasted the strengths of China's grassland physical sciences, with the weakness of China's grassland social science or economics, no effort was made to talk to or learn anything from the pastoral nomads.

Meanwhile, throughout the 1980s and 1990s, grassland degradation persisted and even intensified. Past policy failures were a taboo topic, with the party forbidding discussion of the Cultural Revolution's consequences, after 1989. There had to be a cause of rangeland degradation, and blame fell on the pastoral nomads, with later emphasis on global climate change, neither in any way attributable to Chinese causation.

Today's China now satisfies its hunger for red meat through imports, the opposite of "agro-ecological" production that relies on local sources. "China's growing appetite for meat and shortage of arable land has opened the way for a sharp increase in imports from Australia. Han Lubo explains why he plans to buy as much as a quarter of all the red meat Australia will export this year. "We can only get reliable supplies of domestic lamb that meets our standards in July and August," says Han. Almost all China's lamb and beef comes from low-rainfall grazing lands of northern and western China, which are frozen over for four months of the year. It's impossible for herdsman to supply fresh meat all year round to Chinese markets and restaurants.

“Government-driven attempts to fence in nomadic herdsmen and cram more animals on to their rapidly degrading grasslands have backfired. Having 22 per cent of the world's population but only 7 per cent of its arable land and 6 per cent of renewable water supplies implies that China's red meat self-sufficiency is no longer economically feasible. Chinese red meat production has fallen in recent years as the country has reached something of an environmental frontier. As is often the case these days, the combination of China's 1.3 billion people and rapidly rising incomes can lead to some mind-boggling numbers. Chinese consumers traditionally don't eat much red meat but their appetites are growing faster than in any other major market. China's annual per-capita consumption of sheep meat and beef has risen from 500 grams of each three decades ago to 3.5 kilograms and 5 kilograms respectively, as consumers get richer and borrow consumption patterns from abroad. "The combination of increased wealth, urbanisation, westernisation and population growth saw total consumption of beef and sheep meat in China surge 2.5 million tonnes and 2 million tonnes, respectively, between 1996 and 2008," say Rabobank analysts Pan Chenjun and Wendy Voss, in a recent report, Feeding the Dragon.” (John Garnaut, Dragon's taste for lamb, The Age, 15 June 2010)

On 8 November 2010, Xinhua announced: “PLATEAU MEADOW IN TIBET PROTECTED FROM OVER-GRAZING: More than 68 million mu of meadow in Tibet have been cordoned off as protected reserves over the course of four years to prevent from the damage of over-grazing, local officials said. Herding is only allowed in part of the reserves and for a certain period of time. The government has offered cash remedies and job training to herdsmen who are no longer allowed to herd. The authorities have spent 1.57 billion yuan (232 million U.S. dollars) promoting the cordoning-off-meadow program in Tibet since 2004 to repair the deteriorating ecological system there.”

China now says that, in addition to the core nomad removal zone in the Three-River-Source area of Qinghai province, in Tibet Autonomous Region 56 per cent of all herd animals have now been removed: “Southwest China's Tibet Autonomous Region has made big progresses in effectively restraining the degeneration of grassland by launching projects of returning grazing land to grassland. According to sources with the Department of Agriculture and animal Husbandry of Tibet, the region has converted 68.41 million mu (about 4.56 million hectares, 15 mu equal to one hectare) into grassland since it started the returning grazing land to grassland program in 2004.

The move has allegedly also helped local farmers and herdsmen increase income by joining production of the secondary and tertiary industries. Currently, the returning grazing land to grassland program has been carried out in 27 counties of seven prefectures or cities. They have turned 12.3 million mu grazing land into grassland this year. The region has taken such measures as grazing prohibition, enclosure feeding and reseeding the grassland. The project areas involved 86,000 herdsman households in end of 2009, and had 13.44 million heads of domestic animals in stock, accounting for 56 percent of the total in the region.” (Tibet converts more grazing land to grassland, Xinhua, 4 November 2010)

The poverty resulting from internal displacement is evident even to reporters in China's official media: “It has been six years since Zhaduo was moved away from his home on the ecologically vulnerable grassland on the Qinghai-Tibetan Plateau, but the 33-year-old said he still misses his yaks and the life of a herdsman."The money

for selling 40 yaks and 25 sheep has been used," Zhaduo said. "It is so expensive to now live near the town centre. Everything costs big money."

Zhaduo is one of the emigrants from Rima village in Yushu County of northwest China's Qinghai Province, near the source of China's three major rivers - the Yangtze, the Yellow River, and the Lancang River - which form the world's highest plateau wetland, known as Asia's water tower.

China started moving people out of the 150,000 square kilometres Sanjiangyuan region more than five years ago in a bid to repair the ecological system damaged by excessive herding and to transform the area into an unpopulated nature reserve.

"So far, some 50,000 herdsmen, mostly Tibetans, have bid farewell to the nomadic life and were moved closer to the town centres near their old homes, where they have better access to health and educational resources. Zhaduo basically has no jobs in the months other than the harvest season from May to June, and he has no sense of security since he is relying on a business which can be bankrupt by inadequate rainfalls or abnormal climate changes. "There is no way to return - the grassland is sealed off by the government and, anyway, I don't have money to buy yaks and sheep," Zhaduo said." (China's resettled herdsmen deal with adjustment woes, Xinhua, 23 Sept 2010)

## **BIRTH OF A "WATER TOWER"**

The accelerating loss of grasses and soil was of increasing concern to Chinese policy makers, not because of the threat to nomadic livelihoods and even food security, but because the area desertifying most rapidly is the Tibetan source area of both of China's great rivers, the Yellow and Yangtze, and also the Mekong of SE Asia. The upper watersheds were mapped quite vaguely and poetically until China took command of the grasslands in the 1950s. Until then, the glacial sources were simply called mountains of heaven, their exact location of little concern. But a modernising nation-state determined to make an empire into a unitary state that is mapped and therefore inscribed with statist meaning, had to make the precise source politically significant. This gave party leaders in remote Qinghai province an opportunity to raise the profile of their neglected province in Beijing, and attract central finance for major infrastructure projects. In order to get Beijing's attention, Qinghai party leaders coined the term "China's Number One Water Tower" to redefine the Tibetan, overwhelmingly nomadic, areas of Golok, Yushu Tsolho and Tsonub. These four prefectures were rebranded as the *Sanjiangyuan*, the Three-River-Source region, and became the forefront of official policy to discipline, and then expel the nomads, in the name of growing more grass, to protect China's newly mapped upper watersheds. Officially, these areas add up to 363,000 square kilometres, an area bigger than Italy and Switzerland combined. (Eco-protection effective in Sanjiangyuan area, July 23 2009, Xinhuanet)

Far from being a "water tower" the Tibetan Plateau is one of the more arid regions of China. The river source area has been desiccating over a long period, now accelerated by planetary climate change, with no measurable recharge of glaciers since the 1950s. Naming this huge area a water tower imposes too great a burden.

Policy for managing the water tower for China's downstream users was based on the reports of Chinese scientists, with nomads not consulted at any point. Chinese pratacultural science is new, since China has almost no history of active management of grasslands, and the widespread ploughing of the Inner Mongolian grassland throughout the 20<sup>th</sup> century, by immigrant settlers, was by the 1980s an all-too-evident failure, a primary cause of embarrassing dust storms enveloping Beijing. China's academic journals of pratacultural science are filled, not with fieldwork, but with data gathered from afar, often by satellite imagery, good for mapping sunshine hours, rain and snowfall and inferring from that how much grass grows in lower winter pastures and alpine meadow summer pastures. The scientists established a research station at Haibei, north of Xining, measuring grass growth rates with and without grazing, with and without climate change temperature increases.

The policy advice of the scientists was that the nomads are irrational, selfish, greedy and ignorant, and require strong statist intervention to discipline their destructive behaviours. The nomads were accused of routinely overstocking the pastures, going beyond the carrying capacity of the grasslands. The concepts of carrying capacity and stocking ratios were imported ideas that can reduce to a single number the optimum herd size for a particular area. But such simplistic formulas have little use in Tibet, where climate is highly variable, unpredictable and often extreme. An unseasonal autumn blizzard can trap a herd on the high alpine meadows, preventing their return to lower altitudes for winter, killing as much as half a herd in days. "The land contract system has turned herdsmen into ranch owners, making them more responsible for protecting the prairie environment," said Tuya, a researcher with the Pasture Economy Research Institute under the Inner Mongolia Academy of Social Sciences. Previously people cared little about sustainability of the grassland because everyone could use it freely, Tuya said." (Over half of natural grassland in China's Inner Mongolia now ranchland, Xinhua, 10 July 2010)

At best, formulaic stocking ratios might be useful if calculated in collaboration with the nomads, making full use of their intimate local knowledge of each pasture; and if the calculation was localised to the specific circumstances of each plateau and grassed valley. This cannot be done by satellite; it can only be done using the co-management methods used in participatory development programs, which China has conspicuously failed to attempt.

The origins of today's tragedy lie in this conjunction of narrow science and China's water politics, especially the years in the late 1990s when the Yellow River dried so totally it failed to reach the sea for hundreds of days, due to massive overuse by lowland Chinese agriculture and industry.

## **POLICY FAILURES REACH CRISIS POINT**

China's policy objectives were highly contradictory. On one hand, China wanted more meat and more productivity from the nomadic economy, to be supported by guaranteeing land rights to promote long term productive and sustainable land use. On the other hand, state policy was to punitively impose herd size limits and arbitrary

stocking rate numbers, to demand limits to family size in a nomadic economy always -in the busy summer season- short of labour. China also wanted to protect its "Number One Water Tower."

These conflicting policies reached crisis point around the turn of the millennium. It was clear they could not all be achieved. A political decision was made at a high level that watershed conservation was the highest priority, and that herds and herders must be removed in order to grow grass in the watersheds. The surplus herders would be sedentarised, making them visible to state scrutiny, their children available to the statist pedagogy of a school curriculum that emphasises political education in the duties and loyalty of each citizen in building a strong new China and a new socialist countryside. By schooling the nomads their low human quality would be improved and they would contribute to China's collective task of constructing modernity and comprehensive national power.

In reality, surplus nomads are seldom trained in new skills, nor are the newly built concrete block houses, hot in summer and icy in winter, located near to employment opportunities. What is worse, the ex-nomads, according to testimony of nomads who have briefly left Tibet, and were interviewed by development agencies in Beijing and India, they are required, as a condition of being issued a house occupancy certificate, to make a legally binding promise not to keep any livestock at all. The penalty is forfeiture of the block house into which they have been placed, far from their customary rangeland. Given that most nomads are illiterate in Tibetan, and that the documents they sign, with a thumbprint, are in Chinese, a language they can seldom speak, still less read, they are required to sign away all rights to the livestock livelihood that has been their whole world, without any negotiation, informed consent, right of appeal, or any other right of refusal.

But according to Chinese leaders, the benevolence of the state now enables the pastoralists to live a wonderful new life. In June 2010 visiting international journalists were told by Hao Peng, deputy secretary of the Party in the Tibet Autonomous Region: "that the central government has been implementing an affordable housing project in Tibet since 2000, in an attempt to improve the living conditions of local farmers and herdsman. It focuses on the renovation of herdsman's houses, nomad settlements and relocation of residents from impoverished areas. So far, 80 percent of local farmers and herdsman suffering from bad living environments in the past have moved into safe and comfortable houses, and the majority of the nomads have settled down. Hao told reporters about what he saw and heard when he conducted a social survey in Tibet. It has greatly improved the living environment of the local people. At present, many nomads have not only built comfortable and beautiful houses, but also purchased household appliances and furniture. Now, children can go to schools and senior citizens can live a happy life at different settlements. Young people graze animals on hilltops in summer and return to the settlements in winter. To sum up, the settlement-related policy is supported in pasturing areas because it can meet the local people's needs. Hao added that Tibet will formulate more policies to satisfy local people's new demands for houses during the 12th Five-Year Plan period." (Foreign reporters visit Tibet, People's Daily Online, 6 July 2010)

This idyllic version is contradicted by Chinese scientists, who are increasingly explicit about the policy mistakes enshrined in regulations. The Chinese Academy of Sciences issued the following in July 2010: "The current policy for the management of the grasslands concerns the individual household contracts system, but many

ecologists have their doubts about this system. This regulation transfers the ownership of the pasture from the public to the individual, with the aim of avoiding the "exhaustion" of the grasslands. The individual household contracts encourage the herders to increase their productivity, and it has increased rapidly in a short period. The contract system broke the traditional notion of grasslands as collective property, as herders install wire fences around contracted pasture and build their own homes there, declaring a private zone.

"By cutting off migration routes of large herds, the partitioning of the grasslands has forced herders to give up the nomadic way of life and turn to farming, which means that nomadic culture is now in danger of extinction. Before the individual household contracts, the grasslands and livestock were owned by the herders collective. The income distribution of herders was calculated according to their work points and they still maintained a nomadic lifestyle. But now, the herders have turned to farming. Their main methods had previously been grazing on pastures, meaning that the cattle foraged on one pasture after another, ensuring that the pasture was able to recover. But the individual contract restricts the size of each household's land for pasture, and the increase in the productivity of herders has led to an increase in herd sizes. This has all impacted the vegetation which has been depleted." (Disappearing Grasslands - From Prairies To Deserts, States News Service, 30 July 2010)

## **SCIENTIFIC EFFECTIVENESS OF REMOVING ANIMALS AND NOMADS FOR DOWNSTREAM CHINA**

The various official programs impacting negatively on Tibetan nomads are clustered around assumptions that degradation of land is caused by conversion of forest and grassland to cropland, and that nomads use grassland heedlessly and destructively. These assumptions are the givens of policies aimed at curbing land use by farmers and nomads, in many areas of China, but especially in the upstream areas of China's great rivers, which rise in Tibet.

Converting sloping farmland back to forest or grassland is often called "grain-to-green" in China, or sometimes Conversion of Cropland to Forest and Grassland Program (CCFGP). A major rationale for such programs is flood protection, on the assumption that the less land is ploughed for crops, or degraded by overgrazing; the more other vegetation can grow, retaining both rainfall and soil, thus preventing floods. Implementation of these programs is now well advanced, and China has spent much on their enforcement. Now that so many nomads and farmers have been made to either leave the land and resettle, or stay on land they can no longer use productively, evaluation is possible.

A recent evaluation by scientists at Australian National University shows, in great detail, that the reduction in downstream flooding is actually negligible, while the costs of the program are high, especially the cost in lost food production. Prof. Jeff Bennett's team of Australian and Chinese scientists reported to the Australian government in 2009 that along the entire length of the Yellow River, total flood control benefits add up to RMB232 million, while lost food production adds up to RMB 667 million. (Professor Jeff Bennett, Environmental Management and Development Program, Crawford School of Economics and Government, Australian National

University, Professor Yangwen Jia, China Institute of Water Resources and Hydropower Research, Ms Lei Zhang, China National Forestry Economics and Development Research Centre, Sustainable land-use change in the north-western provinces of China, ACIAR ADP/2002/021 August 2009) The costs of lost food production far outweigh downstream benefits, and lost food production in China raises food prices globally, pushing the world's poor closer to starvation, a problem now so acute that there is now much fear that progress in achieving the Millennium Development Goal of halving world poverty by 2015 is going backwards, due to China-induced global food price rises.

The loss of organic agro-ecological food and fibre production is quantified in China's official statistics on the pastoral nomadic economy of Qinghai province, where nomadic exclusion from pastures is most intensive, and where almost all Tibetan pastoral districts are included in the Three-Rivers-Source animal exclusion zone.

## **ALTERNATIVE APPROACHES THAT ENHANCE AGRO-ECOLOGICAL PRODUCTION, NOMADIC MOBILITY AND WATERSHED CONSERVATION, WITHOUT EXPELLING NOMADS**

Detailed advice on how to conserve areas such as China's Three-Rivers-Source area in Tibet, with rather than without the presence of nomads, is readily available from many sources. Perhaps the most comprehensive manual on how to achieve inclusive watershed protection was published by World Commission on Protected Areas (WCPA), part of IUCN – The World Conservation Union, in its 2004 Best Practice Protected Area Guidelines Series No. 11, titled *Indigenous and Local Communities and Protected Areas: Towards Equity and Enhanced Conservation: Guidance on policy and practice for Co-managed Protected Areas and Community Conserved Areas*. ([http://cmsdata.iucn.org/downloads/pag\\_011.pdf](http://cmsdata.iucn.org/downloads/pag_011.pdf) ) This manual, of 139 pages, provides a richness of examples and case studies showing the processes that enhance the governance of protected areas by those agro-ecological customary owners who can best help states achieve their national goals of conserving areas designated for official protection.

There are many international organisations working, in practical ways, to achieve the multiple goals of watershed protection, climate change mitigation, enhancing livelihoods of customary land owners and conserving biodiversity.

There are many examples close to Tibet, of policy initiatives that work with, rather than against, local community participation and co-management of areas under official protection for conservation purposes. In Nepal, Bhutan and Mongolia there have been many projects to include rather than exclude local communities from protected forests, parks and river systems. Bhutan and Mongolia are committed to providing nomadic herders with a livestock insurance scheme that enables pastoral nomads, operating in environments quite similar to Tibet, to finance the restocking of herds after a natural disaster, thus removing a fundamental survival anxiety of nomads, enabling them to feel more confident about reducing herd size, and avoid overgrazing. The simple and inexpensive nomadic livestock herd insurance scheme pioneered in Mongolia in recent years by the World Bank and Mongolian government is a good example of what can be achieved to reduce grazing pressure in

overgrazed areas, without turning to the last resort, of expelling both nomads and their herds, which China has done as its first resort.

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2006		2438	703	651	1703	1066
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2008		2405	696	645	1678	1032

Source: Qinghai Statistical Yearbook for 2009.

These figures suggest total herd size has remained static for decades, despite shrinking areas available for grazing, as fencing, restrictive land enclosure and other regulations made animal rearing less and less viable. Now an entire industry is being closed, or permitted only on small ranches where animals are penned, and feed trucked into feedlots close to urban markets.

What is at stake is considerable production, as recorded in the Qinghai province table below, which starts in 178, then 1980, 1985, 1990 and every year since, up to

2008. The figures are in tons: