

Unsustainable Futures

China's Eco-compensation Policy on Tibetan Grassland

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The Tibetan Centre for Human Rights and Democracy (TCHRD) is a registered non-governmental human rights organisation established in January 1996 in Dharamsala (India) with the mission to protect the human rights of the Tibetan people in Tibet and promote the principles of democracy in the exile Tibetan community.

The centre is entirely run and staffed by Tibetans in exile. TCHRD's work entails monitoring, research, translation, documentation of human rights violations in Tibet. The centre conducts regular, systematic investigations of human rights abuses in Tibet and publishes an annual report, thematic reports, the translated testimony of victims of human rights violations, electronic newsletters, and briefings on human rights issues that confront Tibetans inside Tibet. The centre generates awareness of a wide range of issues relating to human rights and democracy through both grassroots and diplomatic means, using regional and international human rights mechanisms as well as community-based awareness campaigns.

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Executive Summary

In a world where political leaders lag so badly behind what climate science tells us must be done, people worldwide naturally hope to find leaders who lead, who face up to planetary peril and act decisively.

Tibet and the Tibetans provide ecosystem services for the whole of Asia and well beyond. This is a Tibetan perspective on China's promises on eco-compensation for upland communities that provide ecosystem services for crowded lowland China. This report looks closely at China's official policies for the upper riparian Tibetan communities of the headwaters of both of China's great rivers - Machu (Yellow) and Driчу (Yangtze) - and other major Asian transboundary rivers.

China is now in a competitive race with the US on climate action and environmental progress. A world anxious to see effective action to reduce carbon emissions, culminating in the November 2021 UN climate treaty negotiations in Glasgow, understandably hopes that, on this issue, China and the US can cooperate, even if they are hostile to each other on almost all else.

China has been persistently accumulating its climate capital, through its rhetoric of ecological civilisation construction, carbon trading, grain to green, closing pastures to grow more grass. China has much to say on eco-compensation, intrinsic to China's credentials as a climate leader and as benevolent governance of ecosystem services and respect for those who provide them.

This report looks under the hood, at what China's eco-compensation actually means, on the ground, in Tibet. Critiquing China's performance is not undermining cooperation at a moment when global cooperation is crucial. Competition may be better, and competition includes ongoing assessment of the credentials of each competing player.

Personal accounts of former Tibetan nomads quoted in this report are based on testimonies collected in July and August 2021 by TCHRD researchers. All interviewees are unnamed for security reasons.

China can do better, especially in Tibet, where eco-compensation actually means expelling Tibetans from their pastures, and compensating the cadres who oversee the expulsions. This is not what the rest of the world means by payment for ecosystem services. What China means by eco-compensation is at best vague, making little mention of local beneficiaries recompensed to stay on their lands and continue with practices conducive to biodiversity protection and delivery of ecosystem services. At worst, and commonly practiced, most transfer payments badged as eco-compensation never reach local communities, or are paid for nomads to relocate away from their lands, for their subsistence.

None of China's regulatory and policy frameworks on environmental conservation integrates the human rights based approach to protect communities from harmful effects of displacement and climate change. China's climate change mitigation and adaptation strategies need serious reconsideration not only to promote environmental conservation but also to protect sustainable livelihood sources and human rights.

At the Glasgow climate treaty COP, the world's core concern will be the great gap between China's rhetoric and its actual plans to build many more coal-fired power stations. China's ongoing, unrelenting reliance on coal-fired electricity is the main driver of China's carbon trading scheme, which attempts to offset criticism by proclaiming emissions are offset by payments for ecosystem services that capture carbon in Tibet. The displacement of Tibetans is thus of concern to the world, which needs to know that what is labelled eco-compensation actually reduces emissions, and rewards those who provide ecosystem services.

Recommendations

1. Climate change across the Tibetan Plateau greatly impacts Tibetan livelihoods already; even though Tibetan customary modes of production generate very little of the emissions that cause climate change; at a time when China, the world's biggest maker and user of coal, cement, steel, aluminium, copper and much else, is the primary cause of climate change emissions.

China however makes great use of Tibet to mitigate its climate impact by declaring huge watersheds to be national parks, thus offsetting ongoing and still rising emissions, and repairing reputational damage.

Using the Tibetan Plateau as an offset has not translated into eco-compensation for rural Tibetan land holders for their provisioning of ecosystem services, not only across China, but throughout all major watersheds of Asia. Instead of compensating Tibetans for the loss of permafrost and wetlands, due to climate change driven by China's emissions; and for the costs of increasing flooding, lake overtopping and extreme weather, China uses its adoption of Natural Ecological Capital Accounting to relocate Tibetans away from their lands.

2. China's natural capital valuation calculations assign a monetary value of the ecosystem services provided by Tibet, especially the uppermost 1000 kms of both the Yangtze and Yellow Rivers, in multiple billions of dollars. However, China stops short of connecting the ongoing flow of ecosystem services to the ongoing flow of work done daily by Tibetan land holders to ensure provisioning of those ecosystem services.

China has adopted Natural Ecological Capital Accounting as a tool of spatial planning, in ways that separate natural capital from those who provide it. Not only does this disempower and devalue those human communities who for thousands of years practiced sustainability; it facilitates their removal from the land if for any reason they are blamed for any risks to ongoing ecosystem services delivery.

China should clarify its distortion of key concepts of environmental governance. What the world means by eco-compensation is that local communities, with a long record of sustainable landscape and ecosystem stewardship are directly compensated for their ongoing in situ contribution to the provisioning of ecosystem services, in recognition of the opportunity costs they incur by foregoing development, industrialisation and land use intensification.

3. Clarify payment for ecosystem services. Worldwide, this means contracts connecting upper riparian customary land managers with lower riparian users of ecosystem services, communities, provincial and national governments, and industries reliant on ecosystem services delivered from afar; which guarantee payments and specify who and how those services are to be protected, and by whom. These contractual agreements empower local communities to continue their customary practices, including livestock production and cropping, on the explicit understanding that these practices are both productive and sustainable.

Payment for ecosystem services is directed to the people on the land, who do the daily work of maintaining the flow of ecosystem services. Payment for ecosystem services is not government to government, across geographies; nor is it from industrial corporations reliant on ecosystem service delivery, paid to local governments in areas where ecosystem services originate.

Land tenure rights should be strengthened, not unilaterally cancelled.

4. Biodiversity globally is highly endangered. The world expects effective action from the Convention on Biodiversity (CBD) before it is too late. Yet China's new system of national parks, mostly in Tibet, are not in the Tibetan areas of greatest biodiversity. The COP of the UN Convention on Biodiversity in Kunming from 11 to 15 October 2021 should prioritise defining its Target 9 for 2020 through 2030, on benefits for people through sustainable management. Indigenous and traditional local communities with long records as sustainable land managers must be the primary beneficiaries, and legally defined recipients of eco-compensation, as CBD Article 8(j) has long insisted. This is especially applicable to states which until very recently had little presence in remote landscapes such as the

pasturelands of the Tibetan Plateau, and little interest in traditional knowledge, traditional management practices and sacred land protection rituals.

Target 10 of the 2020-2030 CBD goals, ensuring areas under agriculture, aquaculture, and forestry are managed sustainably, should explicitly add fisheries and livestock including nomadic pastoralism.

This is a question of human rights and sustainable development, and of nature's contribution to humanity, with global impacts and consequences. The Tibetan Plateau is close to two per cent of the planet's land surface, the size of Western Europe, and with as much global importance as other comparable geographies, perhaps more since the elevation of the Plateau has a global impact on jetstream, monsoon dynamics and the water cycle of the entire northern hemisphere. Tibetan nature's contribution to humanity is exceptionally big.

5. Depopulating the grasslands is not conducive to benefiting nature or customary guardians. If China, at national and local government levels, persists in relocating selected rural landholders, while redeploing others as national park rangers, and encouraging more to leave the land, this developmentalist and productivist approach contradicts benefits for people through sustainable management, a key objective of the UN Convention on Biodiversity. At the CBD COP renegotiating the Nagoya Protocol on Access and Benefit-sharing, in Kunming from 28 April to 8 May 2022, the ongoing rights of Tibetan traditional landowners to secure land tenure, and freedom from arbitrary displacement must be reconfirmed by the host nation. Access means access. Benefit-sharing means local communities share benefits by remaining on their lands, valued, honoured and recompensed for their ongoing and skilful work of maintaining sustainable land use.

Target 2 of the CBD goals to 2030 call for restoration of degraded ecosystems, which is most effectively achieved by keeping customary land tenure holders on their lands, employing them to sow native grasses and re-establish ground cover. Excluding nomads and widespread poisoning of grassland rodents are mistaken policies incompatible with Target 2.

7. If China launches large scale national parks, largely on the Tibetan Plateau, scientific estimates of species abundance cannot be used to exclude customary land users from core zones. Degraded areas are best rehabilitated by employing local communities to do the labour-intensive work of reseedling and protecting native grasses and sedges during the years it takes, in a cold climate, to re-establish underground biomass.

China's policy of "orderly withdrawal" of pastoralists from Tibetan pastures is unscientific, contravenes available evidence, and should be declared a contravention of Article 8 (j) of the Convention on Biodiversity.

Employing a limited number of Tibetans as rangers, whose duties include enforcing grazing bans, is in no way an adequate substitute for ongoing and skilful grazing pressure management by traditional strategies.

China says this ongoing policy of displacement, enclosure, relocation and immobilisation of rural Tibetans is in fulfilment of CBD Target 3, which calls for protecting at least 30% of land and sea areas. This can be achieved better by inclusion not exclusion of local communities.

In September 2021, in a preliminary CBD session, delegates expressed strong support for all local communities living inside protected areas to have guaranteed free, prior, and informed consent to any programs for large scale protection of landscapes under Target 3. This should now be adopted as a binding CBD decision

8. China's recently legislated Yangtze Protection Law must be consistently applied along the entire length of the river, including the upper third in Tibetan areas, with Tibetan river chiefs appointed and empowered to ensure the protections written into this legislation apply on the several major tributaries of the Yangtze in Tibetan Autonomous Prefectures of Qinghai and Sichuan provinces. If upper river reaches are not adequately protected, active protection measures downstream will have limited effect.

Construction of further hydrodams, especially high walls dams, is not compatible with river protection, and fish biodiversity protection.

9. Target 21 of the CBD goals for the decade to 2030 require effective participation in decision making related to biodiversity. Tibetan pastoralists and farmers have had intimate knowledge of biodiversity endemic to their regions, yet their traditional knowledge has largely been ignored, not gathered by scientists and routinely overlooked. This includes problems arising from human-wildlife clashes, which can be readily reduced by re-empowering local religious leaders, and by a modestly funded compensation scheme, pioneered in Tibet by WWF in 2005, to recompense pastoralists for herd animals lost to wild animal predation.

Sustainable Livelihood at Risk

Tibet is not only the Third Pole, it is the lungs of China, the water tower, the locus of pristine wilderness, offering spacious vistas and healing ecotourism for the masses, with national parks the jewel. Tibet is being thoroughly re-imagined, to serve China in new ways, to be inextricably linked to China; yet paradoxically still with power grids, hydro dams, mining and industrialisation in areas not zoned ecological.

Despite the grand rhetoric and the 14th Five-Year Plan map showing much of the Tibetan Plateau as an ecological zone, northern Tibet (Qinghai/Amdo) is already heavily industrialised with plans for more. The recent expansion of copper smelting in Xining, using copper concentrates trucked in from Chamdo (Ch: Qamdo) Prefecture's Yulong mine in Tibet Autonomous Region (TAR), 1200 km to the south, is just one example.

China's Main Functional Zoning system, part of the state's complex regulatory regime that characterises nomadic traditional mode of production as backward, unproductive and environmentally destructive, sets up mutually exclusive categories of economic geography: ecological and economic zones. On the Machu (Yellow River), from glacial source down to riverbed elevation of 3500 m, the first 1500 kms are zoned ecological, sacred wilderness protected by national parks and nomad exclusions. Then, still in Tibet, below 3500 m, the next 1000 km is zoned economic, which at present levels of industrialisation means nine hydropower dams so big they export electricity to distant central China provinces; massive extraction of oil, gas, lithium and magnesium from the Tsaidam Basin, heavy petrochemical plants separating lakebed salts into profitable metals, copper and gold mines, and lithium battery mega factories for electric vehicles. This heavy industrialisation is set to accelerate further.

The contradiction is acute. Why is the Machu above 3500m sacred, such an essential ecosystem service that it is necessary to displace the nomads; while the riverbed in Tibet, from 3500m down to 2300m is open for exploitation of all kinds, including routine dumping of wastes into the river?

Further, within the designated ecological Main Function Zone, the pastoralists who remain on their pastures are now under pressure to intensify production, sell and slaughter more herd animals younger and faster, enabling agribusiness meat factories to set up commodity chains for maximum profit.

Until very recently the split of Tibetan areas in Qinghai into pastoral and productive zones created two economies, economically far apart, with few linkages. Lower Qinghai, around

Xining and to the Gansu border was more developed, more densely settled, more able to attract investment; while the highlands were dismissed as hinterlands, suited only to Tibetans, underinvested and undercapitalised.

Geographically well over 90 per cent of Qinghai, by area, is upland, officially designated as Tibetan autonomous prefectures, but by population and wealth accumulation, the much smaller lowland area of eastern Qinghai has dominated.

The big change is that what had been seen only as frigid wasteland is now re-imagined as national park, protected area, source of ecosystem services. The upland is now monetised. That does mean better protection of wildlife, better enforcement of longstanding anti-poaching laws; but it also means ongoing displacement of nomads.

It means China for the first time sees the Qinghai plateau highlands as Chinese, as serving Chinese purposes integral to China's economy and future. China's national parks nationalise Tibet.

China hopes Tibet can become a profit centre, through eco-compensation payments, rather than its chronic role as a cost centre dependent on endless subventions of central funding, for diminishing returns.

Yet the official 2021 Opinions on Establishing and Improving the Mechanism for [Realizing the Value](#) of Ecological Products are remarkably tentative. How often does the CCP Central Committee call for *"policy and system innovation experiments, allow trial and error, timely correction, tolerance for failure"*?

Worldwide, there is still no price on carbon emissions high enough to change anything. Carbon trading has been talked about for several decades, with little result. China has good reason to wonder aloud if the rich will bother to pay the upland inland more than token amounts.

China's enthusiasts for natural capital valuation of ecosystem services have come up with dramatically bold numbers for the dollar value of what Tibet provides; and already there is pushback by Chinese economists who argue that such calculations may add up the value of services, but must also subtract the costs of their guaranteed supply. That sharply reduces the monetisation of Tibetan ecosystem services, according to some economists.

There is also the question of whether Tibet's ecosystems that do not directly serve lowland China are actually services that count. This is especially true of the vast land of lakes of upper Tibet, a huge area of alpine desert, the Chang Tang empty plain, where innumerable lakes annually fill with rain and snowmelt, but have no outlet. These highest plateaus are so flat they

are fed only by short, seasonally intermittent rivers, but nothing flows out. This endorheic flatland has long maintained a water balance through evaporation, maintaining lake levels through the intense sunshine at high altitude, despite the cold.



Nomadic life is a lot of hard work but it is a stable, sustainable lifestyle. If I could choose, I would go back to being a nomad but I do not have a choice. Life in town might look convenient but it is fragile and uncertain because we do not have a permanent income source here.

Interviewee 4, Chumarleb (Ch: Qumalai) County, Yushu Tibetan Autonomous Prefecture

The latest move is to expand the capitalisation of ecosystem services further by valuing the cultures of the customary stewards of nature. This makes the culture of conserving sacred areas, forests, wetlands and pastoral plateaus all monetizable, thus eligible for eco-compensation.

REDD+ on Tibetan Grasslands

What China is doing on the grasslands of Tibet is simply an extension of the growing global market-based system of REDD+, an acronym for Reduced Emissions from Deforestation and Degradation.

REDD+ involves corporate polluters paying for mature forests to not be felled; or for young forests to capture carbon as they grow. Either way, those who control the forests must promise to not log them in the future, supposedly the long-term future. In reality the forests in many remote areas are controlled not by local indigenous communities but by forest logging companies who find it highly convenient to do business as usual, clear fell a forest, plant saplings and enrol in a REDD+ scheme, to be paid for doing nothing while the trees grow to maturity, taking carbon from the air as they grow.

More usually, the REDD+ payment made by major carbon polluters such as airlines, are made to prevent mature forests from clear felling. The amount to be paid is calculated by monetising a hypothetical: how many trees would have been cut down if there were no REDD+ payment?

Not surprisingly, many scientists call this a scam. “It’s a scandalous situation,” Philip Fearnside, an ecologist at the National Institute for Research in Amazonia, said of the current state of the REDD+ system. [“Most of this is pure public relations.”](#)

China extends these dubious schemes from the forests to the grasslands, since REDD means Reduced Emissions from Deforestation and Degradation and China blames Tibetan nomads for soil degradation, which were actually caused by past successive policy failures. Extending REDD+ to the Tibetan grasslands as a particular kind of payment for ecosystem services at first seems odd, because forests do sequester huge amounts of carbon, grasses far less so. A growing young forest can sequester carbon for decades, and for centuries, if left to grow; but a grassland with no grazing pressure will add to its carbon biomass only for a few years, then reach its maximum.

However, the great attraction for China’s party-state is that the extra carbon stored by grasses will happen only once the grazers and their grazing herds have been removed. Then those in charge of the removals - local and higher government officials - can claim the credit for the extra biomass captured by grasses no longer under grazing pressure. Thus, the payment for ecosystem services rightly belongs to the state, and is incorporated into the complex accounting of transfers, for various purposes, from national to provincial, prefectural and county governments.

The nomads have no claim to such payments; the work of saving the planet has been done by the party-state. Initially, under China's carbon trading regime, such payments are meant to come from the coal-fired power generators, and as carbon trading expands, from other polluters as well. This may eventually include global players, such as airlines keenly aware their carbon emissions are increasingly unpopular, and have become the leading proponents of REDD+. If China can package its ecosystem service payments, it could then claim recompense from global markets for what it is doing in Tibet.

Greenwashed Virtue Signalling

If one looks closely at recent policy decrees from China, there is plenty about how to value ecosystem services, how to ensure richer provinces do pay, both through regulatory compliance and market-based incentives for polluters to offset their emissions. Yet nothing is said about who the beneficiaries will be, who will actually receive the payments, so as to guarantee ongoing delivery of precious ecosystem services in future decades.

Money will change hands. Payments will be made. But who will receive them?

As with carbon trading worldwide, these officially mandated programs will take time to gain momentum. Even in an authoritarian system, there is a limit to how much rich coastal provinces can be made to pay to poorer inland provinces, since for decades they have been able to take the clean air and clean waters that flow from the inland west, from Tibet, as free common pool resources without cost.

China made a start by commanding China's thousands of coal-fired electricity power stations to trade carbon, but made compliance painless by issuing so many free permits that only the dirtiest power plants had emissions above the permitted limit. Now China's coal fired power stations are demanding increased selling prices of electricity, without extra payment to upstream ecosystem service providers.

In practice, as in other areas worldwide, market-based carbon trading has barely flickered to life, the carbon price remains too low to change anything much. Neither the carbon spewing power stations, nor the upland sellers of carbon credits actually pay or receive much; and many wonder if the rhetoric of market-based solutions is just greenwashed virtue signalling without substance.

A prime example of market-based carbon trading is Microsoft paying Rupert Murdoch \$A500,000 to offset Microsoft's carbon footprint. A beef and lamb meat farm owned by Murdoch in Australia is improving its farming practices, somewhat [reducing the carbon](#)

[emissions](#) from one of the most carbon emitting of all industries. On paper, the farm is reducing emissions and on paper Microsoft is a further step towards being able to boast of being carbon neutral. Microsoft's need for favourable coverage in Murdoch media has nothing whatever to do with this payment. That's how market-based carbon trading works.

A 2017 study of Payment for Ecosystem Services in China found similar “broad institutional gaps, scheme overlaps, sole funding source, and the lack of effective tools in monitoring ecological outcomes are identified as major challenges for existing PES schemes.”¹ Nonetheless, in June 2021, China expanded its carbon trading system beyond the coal fired power stations to include more industries, more permits, more carbon credits and so more contracts with these upland plateau folks to sequester more carbon, for longer periods. Yet again, this all sounds good, until one looks more closely at how carbon capture in Tibet's myriad plateau pastures is achieved.

For decades, since this century began, the official slogan has been “close pastures to grow more grass”, *tuimu huancao*. That governing concept requires the relocation of Tibetan pastoralists, emigrating them to urban fringes where they are disempowered and lack vocational skills for urban employment. That has been policy for decades, and is ongoing.

Disempowered Futures

These days China has decided where in the high pasture one can live and work. The Tibetans currently being removed from above 4800m have a predetermined future. China has plans for them. No longer are nomads displaced, voluntarily or otherwise, to lead idle, demobilised, demotivated lives on urban fringes, subsisting on official handout subsistence rations. They are to be employed in the physical labour of taming the wild rivers of southern Tibet, along stretches of river where there is massive seasonal sand deposition. As the summer monsoon withdraws and river levels drop, the rivers drop their sediment load, and on some stretches, wide beaches appear. Being sandy and seasonally prone to flooding, little grows in these liminal areas. This has never bothered Tibetans, nor did they take it as a sign of problems.

However, in the eyes of modern China, this is desertification and is to be fought. China prides itself on the effort it has made to reverse desertification, such as the large area upwind of Beijing, in arid Inner Mongolia, where the dust storms that blot out Beijing skies originate. Sandy desertification is thus a problem, and one the party-state knows how to conquer.

¹ Xingliang Pan et al., Payments for ecosystem services in China: Policy, practice, and progress, *Journal of Cleaner Production*, 158 (2017) 200e208



The nomads have been evicted from their ancestral lands and now forced to live in government housing. Life in a modern tent might look more comfortable but it lacks traditional values. We used to be self-sufficient.

Interviewee 1, Nyintha Township, Sog Dzong
(Chinese: Henan) Mongol Autonomous County, Malho
(Chinese: Huangnan) Tibetan Autonomous Prefecture

However, the intensive plantings needed to bind the nascent soil are labour intensive, not the sort of work immigrant Han Chinese want to do, in remote areas, when they can find urban employment in Tibetan towns and cities. Where to find the labour?

For China, this appears to be a win-win. China expects to be applauded for rescuing the wretches who live in destitution above 4800m. The wild highlands are thus turned into wildlife sanctuaries, and the riverine lowlands are vegetated by Tibetans given purposeful work as the vanguard of combating desertification.

A further attraction of putting the relocated highlanders on the payroll of the Forest and Grassland Administration, for far less pay than Han Chinese migrants obtain, is that this counts as poverty alleviation, furthering China's benevolence.

Hiring relocated ex-nomads has become a feature of China's national park planning, with a carefully chosen strategy of hiring one fit young adult from each nomad family, not more, not less. They are called rangers, but a major part of their patrolling is ensuring there are no livestock or herders in the exclusion zones of the national parks. This includes their own families. Not only do they have local knowledge, and are willing to stay out on patrol for long periods, they and their families are also glad to have guaranteed life-time "iron rice bowl" employment.

Nomadic families all over Tibet have, over decades, been gradually squeezed into poverty by ever tightening restrictions on the size of land allocations, compulsory house construction on winter pasture, carrying capacity and stocking rate limits on herd size, lack of livestock insurance, pressure to sell more animals at younger ages, compulsory fencing of allocated lands, fencing, sowing, weeding, harvesting and storing of fodder crops, and more.

These pressures made mobile nomadism, unpredictable at the best of times, highly precarious. Employment opportunities for rural Tibetans not literate in Chinese are confined to casual road maintenance or unskilled urban construction work, mostly available only in summer when herds need most attention; or caterpillar fungus gathering in spring, in the higher altitudes where they are found.

China's eco-compensation system, in Tibet, has very little to do with compensating the actual landholders whose skills include maintaining grassland health, clean water and air supply, as well as maintaining biodiversity of medicinal herbs in the grassy sward through careful grazing management.

Eco-compensation in Tibet is instead a small but growing part of the intra-government fiscal transfer system, from centre to periphery, from east to west, that props up the revenue starved governments of TAR and Qinghai Province. They, and the prefectures and counties under their administration, are the beneficiaries, financing the bloated, overstaffed public sector employment, rather than trickling down to communities. Seldom do the families doing the actual work of sustainability receive these transfer payments. The few who do receive transfer payments are told it is not a right, it is because the state has chosen to be benevolent.



In 2013, the nomads from my hometown were moved to government-built concrete housing known as “socialist villages” with promises of housing and compensation payment for life. Recently, the government announced that nomads will no longer receive eco-compensation payments from 2021 because their land had been compensated enough.

Interviewee 2, Darlag County, Golog (Ch: Guoluo) Tibetan Autonomous Prefecture

In TAR, local authorities implementing eco-compensation programs “focus first and foremost on funding-oriented task fulfillment rather than rangeland protection.”² The programs are used by local authorities to capture central funding in the form of state subsidies, making Tibetans more dependent on the Chinese state and turning them into new recruits in the state’s massive urbanization drive. Since 2014, when development economist Andrew Fischer highlighted the

² Yonten Nyima (2021): The Implementation of China’s Rangeland Protection Program: The Case of Nagchu in the Tibet Autonomous Region, *Journal of Contemporary China*, DOI: 10.1080/10670564.2021.1893561

TAR government's utter dependence on subsidies from Beijing, that dependence has only grown. In Qinghai in 2019, total provincial government revenue was RMB 218 billion, of which 190 billion or 87 percent was national state financial subsidies.³ In TAR in 2019, central state subsidies provided revenue of RMB 196.4 billion, while revenue raised by TAR within TAR was only RMB 7.5 billion, less than 4 percent of the subsidy amount.⁴

These massive subsidies primarily subsidise the burgeoning securitisation apparatus, the army of surveillance monitors, interrogators and grid managers that make the TAR economy heavily skewed, dominated by these "service" sector workers. But the subsidies also cover provincial spending on myriad programs, including ecological civilisation construction which now includes eco-compensation, all of it badged as China's benevolence towards the weak and poor.

Tibetan provinces, especially TAR and Qinghai have put much effort into attracting Beijing's finance for this newly invented territorialised asset class. This has been an enormous boon for both provincial governments, and they assiduously cultivate the new revenue stream arising from the designation of the Tibetan Plateau as China's "ecological barrier", as it is called in China.

For plateau provinces, magnetising the redistributive capabilities of a centralised authoritarian party-state that can allocate funding as it chooses has been a high priority. Documenting the potential of Qinghai and TAR as exemplary ecosystem service providers began in earnest a decade ago, requiring much documentation, and calculation of the ecosystem services value delivered from Tibet to lowland China.

Qinghai is Beijing's favourite, since both of China's great rivers originate in Qinghai; while the other major rivers of the Tibetan Plateau are all transboundary, and benefit many countries of South and Southeast Asia, after flowing through Yunnan (Mekong and Salween).

³ Qinghai Statistical Yearbook 2020, table 8-1: Government financial revenue and expenditure in main years

⁴ Tibet Autonomous Region Statistical Yearbook 2020, table 5-5 Revenue and expenditure of government funds and subsidies revenue of government.



One of the main reasons for the decline in nomadic herds was the redistribution of land in the 1990s. The ‘household responsibility system’ changed the age-old dynamics of the traditional nomadic way of life, by restricting access to pastures and mobility of nomads and their herds.

Interviewee 1, Nyintha Township, Sog Dzong
(Chinese: Henan) Mongol Autonomous County,
Malho (Chinese: Huangnan) Tibetan Autonomous Prefecture

But it’s not that simple. For Tibetans the key question is: what role for the Tibetan customary stewards of plateau landscapes? What place is there in China’s new decrees for the Tibetans? Do the guardians of pastoral landscapes have an ongoing future, as specialists in maintaining both sustainability and productivity?

Depopulating Tibetan Pastures

China’s latest Five-Year Plan for 2021 through 2025 explicitly states that there is to be an “orderly withdrawal” of rural Tibetans from their lands in areas designated as biodiversity core conservation zones.

So how, with all of China's announcements of eco-compensation and payment for ecosystem service providers, is it possible that the displacements and evictions of recent decades must continue on and on?

It might seem obvious that if China is going to value and maintain the ecosystem services that come from the Tibetan Plateau, the Tibetan people and the land of Tibet are inseparable; they go together. Tibetan pastoralists for thousands of years protected grasslands from overgrazing, wildlife from becoming threatened species, and rivers from pollution, simply by moving on, traversing their nomad lands, living off uncertainty in a highly variable climate, a mobile civilisation that succeeded in making humanly habitable the planet's high plateau.

Yet China has explicit and elaborate plans to empty Tibet of Tibetans, concentrating them in towns and cities, with few ways forward into the urban economy, and no way back to their lands. The process of depopulating rural Tibet over the past two decades has been slow, intermittent, often inconsistent, but also persistent in imposing quotas to be removed on to local communities. Official rationales for these displacements have ranged from poverty alleviation, wildlife protection, carbon capture, to pastoral stocking rate management and land degradation rehabilitation. Now these exclusions are being systematised, expanded and accelerated, across wider areas, in the name of guaranteeing ecosystem services. The new systematic plan clears much bigger areas, and is more totalising in its intention of removing all Tibetan pastoralists from specified plateau pastures.

Upper slopes abound in summer pasture, often so abundantly that neither seasonally migrating wild herds, nor pastoralist herds of yaks, sheep and goats can keep up with the alpine meadow blooming. These upper pastures have long been under the nominal control of pastoral cooperatives empowered by law and by custom to make collective decisions about grazing strategies and timing. By contrast, winter pasture, usually at a lower altitude, has been fragmented by decree, allocated to individual families and compulsorily fenced, to enforce exclusive responsibility and impose stocking rate limits calculated by carrying capacity calculations done from afar. The removal of *drogpa* nomads from their seasonal upper pastures thus deprives pastoralists of essential herd nutrients, and of collective decision-making powers, a double blow.

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The nomads who still live on the pastures are struggling to find grazing ground for their livestock because the government has closed traditional grazing ground. About 60 percent of pasture land has been expropriated in Darlag townships.

Interviewee 2, Darlag County, Golog (Ch: Guoluo) Tibetan Autonomous Prefecture

To most people in China 4800m sounds very high, higher than the closest mountain top, so it is not hard to imagine anyone above 4800m is desperately poor, in need of a benevolent state delivering comfort and security at a lower altitude. Much of the official explanations of the new policy emphasize ongoing poverty alleviation. But most of the arguments for contour-based expulsions are to do with the clash of ecosystem services versus human uses.

While 4800m might seem high, it is also an altitude in Tibet valued highly by ecosystem service valuations (ESVs): *“ESVs increase as the temperature and precipitation increase. Meanwhile, ESVs decrease as elevation increases, forming a high-value area between 4000 and 6000 m.*

With the increase of altitude, climate factors such as temperature and precipitation decrease continuously, and the habitat environment becomes more and more severe. As the per unit area value is higher in wetlands, water, and forest lands, ESVs are not lower in the upper reaches with a higher altitude, lower temperature, and less precipitation than in the middle and lower reaches. Mainly, there are more glaciers and wetlands in the upper reaches. Therefore, when the altitude is above 5000 m, there are still some areas with high ESVs. During 4500–5500 m, ESVs are generally higher than in other regions, while the high-value areas between 3–8°C are concentrated, and the precipitation between 350–650 mm is relatively high.”⁵

One example is Gertse (Chinese: Gaize) County in far western upper Tibet. Despite being classified as alpine desert, and called by Tibetans an empty plain (Chang tang), there is a seasonal flush of vegetation, and *drogpas* do take their herds there.

This huge county, rich in copper and gold deposits, makes a strong case for the customary nomadic strategy of mobility. In an alpine desert, where annual rainfall is only 200mm, pastures suitable for sustainable grazing may be far apart. The same is true in the Chang tang of Ladakh in northern India, where skilful herders drive trusting flocks high over barren mountain passes to get from one seasonal pasture to another. The sturdy self-reliance of the nomads, their bonds with their herds, their deep knowledge of landscapes, weather and seasonal cycles are all evident in the doco [Shepherdess of the Glaciers](#).

The “empty” high plains of northern India and far western Tibet are similar, despite separation by politics. The cheerful *drogmo* milking her tethered herd in Gertse, photographed 20 years ago by Prof. Toni Huber, would today be suspected of criminality. In her hand is the hollow horn of a *drong* wild yak, capacious enough to be useful as a milk pail. Today, possession of a wild yak horn triggers the suspicion that the wild yak was shot, transgressing laws that privilege wildlife over pastoral livelihoods. Nomads are seen as untrustworthy, in the gaze of the state, starting with their mobility, evading scrutiny.

Gertse is over three times the size of the Netherlands, but all human presence is now defined as conflicting with the presence of wildlife, and the ecosystem services delivered by biodiversity. Wild yaks are among the wildlife. Total exclusion of Tibetans from Gertse is now compulsory, while leaving the county open to geologists who map the super-large deposits of gold and copper with increasing excitement at their finds. All that so far prevents exploitation of these deposits is Gertse’s remoteness, likewise many other such deposits across Tibet, many in more accessible locations.

⁵ Tibet Autonomous Region Statistical Yearbook 2020, table 5-5 Revenue and expenditure of government funds and subsidies revenue of government.

The primary justification is China's recent enthusiasm for wildlife protection, and more broadly, for landscapes and ecosystems of pristine wilderness, which are marketable as tourist destinations. The assumption is that wildlife and human presence are self-evidently incompatible, especially in marginal areas where pastoralism is risky, and hunting wildlife a temptation, despite the repeated admonitions of Tibetan spiritual teachers. This opposition of biodiversity and human land use is hardbaked into the attitudes of conservationists who have worked in Tibet, including Gertse, and is foundational to the science of ecology which tries to define the complexity of ecosystems with humans omitted, to be added in only after ecosystem dynamics are captured. The concept of ecosystem assumes equilibrium, a balance of system drivers that returns the whole system to stasis even when disturbed. If there is no equilibrium, there is no system and ecologists' primary task is to depict a system, which has in practice been remarkably hard to do.

Immobilising the itinerant nomads and nullifying their collective rights to manage broad, extensive landscapes to which they have property rights, strikes at the heart of pastoralism. Making the 4800m contour line into a new exclusion zone, enforced by state power, negates the entire logic of the pastoral mode, moving up and down as the seasons change. According to China's official gazetteer listing of every county and township across China, the median altitude of Gertse is 5021m, with its townships of Mame (麻米乡 Mami in Chinese) at 5246m; Dragpho (察布乡 Chabu in Chinese) at 5120m; and Shenchen (先遣乡 Xianqian in Chinese) at 5076m. If pastoralism is removed, they have little future.

It seems so axiomatic that protection of land and ecosystem services goes with honouring and protecting the human communities of those landscapes. What the world calls "payment for ecosystem services" (PES) in China is more commonly called "eco-compensation." Both concepts explicitly entail payment, from beneficiaries to providers. If there are payments, there must be payers and payees. If there is compensation, those who forgo development and wealth accumulation in order to provide ongoing ecosystem services must be compensated for the opportunity costs they incur. This seems so obvious; it is hardly worth spelling out.

Tibetan pastoralists have for decades been blamed for state failures in rangeland management, and stigmatised as primitive folk with no awareness of the consequences of their grazing strategies, who blindly follow their herds around the landscape, relying on heaven for food.



More than half of the grazing land is now fenced and kept as protected areas. Hence the available grazing land is not sufficient to sustain the traditional nomadic lifestyle.

Interviewee 3, Denma County, Yushu Tibetan Autonomous Prefecture, Qinghai Province

As a result, Tibetan pastoralists have been steadily removed from their pastures, their land tenure rights cancelled, made to sell their herds and emigrate to towns and cities, sometimes nearby, often afar, to live in official ration handouts. China explicitly calls this a civilising mission, propelling the ex-nomads into history, development, wealth accumulation and the urban job market, from black to white, darkness to light. Official policy decrees and official media are full of these stigmatising prejudices. Tibet's darkness now made light by China's benevolence is a phrase often used by officials.

Aid money as eco-compensation

Tibet, especially in the upper river catchments, is now in a new era of eco-compensation and payment for environmental services, or the realisation of natural capital valuation, to use the latest jargon. The entrenched prejudices of central leaders remain unquestioned, and persist in shaping new policies, all predicated on depicting Tibetans as irrational, heedless of consequences, passive, uncompetitive and uninterested in wealth accumulation.

These negative stereotypes are unconsciously embedded in the new policies governing national parks and other areas that provide ecosystem services. So, it cannot be taken for granted that the payments and compensation will be received by the families, the Tibetan pastoral land managers, for their ongoing management of their ancestral lands.

First, it blames the pastoralists for areas where rangelands have degraded, rather than review past state failures which oscillated between concentrating pastoralists into scaled up communes, then went to the opposite extreme of requiring each family to take responsibility for small allocations of winter pasture, insufficient for subsistence survival in an unpredictable climate where snowstorms can happen suddenly even in summer. Not only did official policy swing from the extreme of large-scale communes to micro-scale individual families, eliminating customary herd sharing, each family was required to fence their land allocation, then later tear down those fences to let wildlife resume their seasonal migrations. Elaborate regulations prescribed how many animals were allowed, irrespective of how stocking rate rules affected livelihoods.

Second, rehabilitation of degraded areas was not done the old-fashioned labour-intensive way, of paying Tibetan pastoralists to sow native grasses and take care to ensure they grow. Instead, relocations accelerated, and became more bureaucratic, with urban based cadres given quotas of how many pastoralists to displace from their lands. Policy assumed nature would repair itself, in its own time, of its own accord, a dubious proposition in areas of intense fridity raked by gales that strip soil bare and make it hard for native sedges and grasses to re-establish.

Third, growing a greater biomass of grass became an end in itself, as if grassland is like forest, which can grow and grow for decades and centuries, every year sequestering more carbon. Grasslands are grasslands and not forests because there is insufficient rain or snow for forests to grow. There is a limit to how much grass can grow, even when domestic herds of grazers are removed, along with their herders. For three years after grazing is halted, biomass grows, then reaches a peak. What then?

These three fallacies arise from a foundational fallacy, repeated endlessly in official Chinese documents, that “there is a contradiction between grass and animals.” While formulated as a Marxist dialectic, thus requiring a solution, this is simply the elementary observation that the less the grazing pressure the greater the volume of grass; conversely the greater the grazing, the less grass there is. To call this a contradiction invalidates the hundreds of millions of livelihoods worldwide based on drylands grazing, a nonsense that needs no further refutation.

In practice, Tibetan pastoralists have always been highly aware that as their sheep, goats and yaks graze the alpine meadows, the herds must be moved on before grazing pressure threatens the hardy grasses. In fact, an entire civilisation based on mobility developed in order to ensure the grasses remained healthy, and biodiverse, and not degrade. The pastoralists of the black tents were ready to move on, horizontally from plateau to plateau, and vertically from summer in the mountains to winter on the plains.

None of this was evident to China’s central leaders and planners who to this day dismiss Tibetan pastoralists as fatalistically dependent on the sky to provide. So, when it comes to eco-compensation and payment for ecosystem services, relocation of nomads out of their pastures and into urban modernity remains official policy, backed by legislation and regulations, even down to stipulating that vehicles forbidden to traverse roadless meadows exempts the buses sent to remove nomads from their nomad lands. So, it is not at all clear that the actual active land managers who remain will become recipients of those payments for ongoing provision of ecosystem services.

Who then will receive those compensatory payments? It is increasingly clear that they are all payments transferred within government, from higher levels to lower levels, and from eastern provinces to western provinces. In reality the “realisation of natural capital valuations” will be realised by local governments and local cadres, who administer the ongoing relocation of Tibetan nomads, classifying the displaced officially as voluntary “ecological migrants” who of their own volition surrender herds and lands for the greater good of China and the planet.



Herders are not only restricted from grazing their herds but also from using pastures for other profitable purposes such as collecting caterpillar fungus and medicinal herbs. It adversely affects nomadic livelihood sources and forces the nomads to look for alternative sources of livelihood. Except for nomadic activities, they are not skilled in any other professions and thus lead impoverished lives dependent on state rations.

Interviewee 1, Nyintha Township, Sog Dzong
(Chinese: Henan) Mongol Autonomous County,
Malho (Chinese: Huangnan) Tibetan Autonomous Prefecture

Taken together, China's carbon trading markets, valuations of natural capital, eco-compensation and payments for ecosystem services are an elaborate process for renaming the "aid" richer provinces have long been required to send westward. Until now, "aid Tibet" money was sent in order to alleviate poverty and do something to address the deepening inequality between those who had every opportunity to get gloriously rich, and those in remote areas lacking factor endowments, who fell further behind, a danger to national stability and security.

Now, with poverty officially declared in 2020 as fully eliminated, in Tibet and across China, "aid Tibet" transfer payments are now rebranded as eco-compensation. China expects global acclaim for acting so decisively, while democracies dither and are captured by fossil fuel industry lobbies.

Unconscious Biases

How did China end up perverting the concept of paying ecosystem services providers by dislocating the customary providers, compulsorily evicting them off their lands, yet persisting in calling this eco-compensation?

Is this a cynical misuse of a benign concept that links communities and honours those who keep the rivers and skies clean for all to enjoy? Is this a propaganda inversion, making black white, ignorance strength, and freedom slavery?

A likelier explanation is that the ongoing, accelerating dispossession of the nomads of Tibet is the outcome of unconscious biases, accreted prejudices, misreading and faulty assumptions that have built up over decades, constituting a new normal that central planners do not even notice.

Central planners rely on data that reports Tibetans as a threat to stability and security, are invariably problematic and not a solution. When China turns to ecological civilisation construction as a new goal, no central planner is going to assign Tibetans a role in delivering the solution, since irrational Tibetan nomads are well-known over decades to be the source of the degradation problem. That perception is hardbaked into policy assumptions.

To suggest otherwise would mean questioning past policy failures, which is these days labelled “historical nihilism”, a serious offence. Better, safer and simpler to assume the accumulated reports of rent-seeking local cadres branding Tibetan’s problematic are all accurate, and build on that to get to the desired top-level design of a full Five-year Plan for all of China.

To get to that level of generalisation requires simplification upon simplification, excluding complexities, cases that contradict the master narrative, instances that do not fit the dominant discourse. Tibet is so routinely anomalous, embarrassingly so, that Chinese economists and scientists routinely omit data from Tibet even when crafting tables and rankings of provincial performance. The data does exist, but so often shows Tibet as China’s failure to achieve much.

When the 14th Five-Year Plan was released in March 2021 - over 42,000 words in English - Main Function Zoning took over as a generic category covering the entire Tibetan Plateau as solely ecological, sweeping aside the localised basis for specific quotas of Tibetans to be removed, in specific areas, for specific reasons. The Plan issues specific instructions: “Strictly control non-ecological activities within the scope of nature reserves, and steadily promote the orderly withdrawal of residents, cultivated land, and mining rights in the core area.”

The “orderly withdrawal” of Tibetans from rural Tibet is explicitly embedded in the Plan. The land of Tibet and the Tibetan people are set by decree onto mutually exclusive trajectories. The landscapes are to be protected, the people are to be steadily excluded, through mandatory orderly withdrawal. Far from recognising this as contradictory, ecosystem protection supposedly makes necessary the displacement of the customary ecosystem curators.

This split between providers and provision of ecosystem services is all the more inexplicable because, in a long and comprehensive 14th Five-Year Plan, in chapter 11, titled “Promote green development and promote harmonious coexistence between man and nature.” Within this chapter, is the “orderly withdrawal of residents”, followed by: “Improve Ecological Protection Compensation Mechanism. Increase transfer payments for key ecological function areas, important water system source areas, and nature reserves, and encourage beneficiary areas, protected areas, and upstream and downstream river basins to carry out horizontal ecological compensation through various forms such as financial compensation and industrial support Improve the ecological compensation system for forests, grasslands and wetlands. Promote the establishment of a basin-wide ecological compensation mechanism in important river basins such as the Yangtze River and the Yellow River. Establish a mechanism for realizing the value of ecological products, and carry out pilot projects in the Yangtze River Basin and the Three River Source National Park.”

How is it possible China’s central planners see no contradiction? One answer may be in the elaborate system of monetising valuations of natural capital, assigning a quota of money to the services provided by Tibet and other intact ecosystems. The calculation of value has become a substantial industry, in China and worldwide, with complex criteria for turning landscapes, rivers, lakes, grasses, forests and wildlife into dollars, as the basis for eco-compensation and carbon trading transactions. Many Chinese economists have contributed formulae in an effort to substantiate the substantiality of dollarizing nature. These calculations of the provisioning services rendered by particular landscapes seldom make any mention of the local community providers.

This repeats the original sin of ecology as a science which historically has excluded humans from their depictions of ecosystems, only adding them back in at the end once the dynamics, equilibria and vegetation classes have all been calculated. Thus, we have a paradox: provision without providers, eco-compensation without any of the local custodians receiving the compensation payments.



Although the government introduced the fencing policy to protect the pastures from grazing, I have not noticed any improvement overall. In many cases, fencing the pastures has proved harmful to the movement of wildlife.

Interviewee 5, Dzachukha, Sershul (Ch: Shiqu) County, Kardze
(Chinese: Ganzi) Tibetan Autonomous Prefecture

Wilful Ignorance

Tibetan culture has no value in the gaze of the party-state, especially the accumulated knowledge of rangeland dynamics, since China has shown no curiosity about classic Tibetan nomad pastoral landscape management strategies. This is wilful ignorance. Further, the basic logic of Tibetan pastoralism, the basis of both sustainability and productivity is extensive land use, which means moving on well before any particular pasture is overgrazed. Pastoral mobility that requires light use of many pastures over a big area. But it is fundamentally contrary to China's unconscious bias, which inherits the peasant farmer assumption that producing means

intensive use of a fixed small area, just the opposite of extensive but light use of a large area. China, having never noticed traditional Tibetan pastoral knowledge, is in no way inclined to assign it a monetary value or include it in the category of intangible cultural heritage.

Who are the suppliers of ecological products? Surely this must mean the Tibetan communities that over millennia maintained respect for all sentient beings as core cultural value?

Yet there is little sign that rural Tibetans, neither as communities, villages, families or individuals, actually receive eco-compensation payments, unless they agree to long term displacement from their lands, surrender their land tenure rights, sell their herds and move to concrete apartments on city fringes.

Maybe we need to be patient, given the timeframe, from now to 2035, when the full market-based payment system will have evolved? But in the meantime, the enclosure of the commons and the exclusion of the nomads from their lands is to continue; that's hard-baked into the 14th Five-Year Plan as the continuation of the "close pastures to grow more grass" policy in effect for the past two decades. When Tibet Autonomous Region, Qinghai, Gansu, Sichuan and Yunnan publish their provincial versions of the 14th Five-Year Plan, we can expect further elaboration of how this will work.

Perverse Outcomes

China has been issuing guidelines promoting this for the past five years: "[R]elevant state departments have [successively issued a number of policies](#) to put forward requirements and provide guidance on ecological compensation work. These policies mainly include the "Opinions on Improving the Ecological Protection and Compensation Mechanism" (2016), the "Guiding Opinions on Accelerating the Establishment of a Horizontal Ecological Protection and Compensation Mechanism for the Upper and Lower Reaches of the River Basin" (2010), and the "Central Finance to Promote the Yangtze River Economy" Implementation Plan of the Reward Policy for Ecological Protection and Restoration of the Belt" (2018), "Guiding Opinions on Establishing and Improving the Long-term Mechanism of Ecological Compensation and Protection of the Yangtze River Economic Belt" (2018), "Action Plan for Establishing a Market-oriented and Diversified Ecological Protection Compensation Mechanism" (2018), "Ecological Comprehensive Compensation Pilot Program" (2019), "Support and Guide the entire Yellow River Basin to establish a horizontal ecological compensation mechanism pilot implementation program" (2020), etc. In particular, the "Measures for Transfer Payments from the Central Government to Local Key Ecological Functional Zones" has been updated to version 7 so far."

Clearly there will be payments, payers and payees. In keeping with the party-state's strong preference for the system to be market-based rather than official transfer payments that mobilise sovereign state redistributive powers, the amounts may not be great. But there will be payees, in the language of the party-state, suppliers of ecosystem services who are to be paid. So, who are they, if they are not the nomadic land managers?

Perverse outcomes of official policy are not uncommon in Tibet. The five Tibetan provinces must all conform to policies intended for all 30 provinces across China, a one-size-fits-all model that is seldom designed with Tibetan circumstances in mind. A classic example of perverse outcomes is the 1980s and 1990s policy of requiring each nomad family to fence their allocated winter pasture; then 20 to 30 years later, requiring those fences to be dismantled, in the name of biodiversity freedom of movement for migrating herds of wildlife. Nomads did not like having to fence their lands, especially since the allocated boundaries were usually too small for the herd size needed to maintain production and as the only available insurance against disaster. Pastoralists were often paid poverty alleviation funding due to them, in the form of rolls of fencing wire, but were often required to pay themselves for some or all of the cost, as well as do the work of erecting fences. Within the fence, cadres on inspection tours could impose stocking limits that pushed many pastoralists into poverty.

Decades later those fences had to be removed. A perverse outcome, a classic of unintended consequences. Now a far greater perverse outcome looms. In the name of climate adaptation, China is moving to greatly boost electricity production from solar and wind power, and to reduce carbon emissions by encouraging the sale of electric vehicles powered by electric batteries.

All of these new technologies are heavily reliant on intensive use of specific minerals, notably copper and aluminium, from Tibet. Both copper and lithium extraction are intensifying rapidly in Tibet, likewise the installation of massive solar farms and wind farms, and hydropower dams that not only interrupt Tibet's rivers but export their electricity, on copper cables, right across China from west to east.

This adds up to a sudden escalation of extraction from Tibet, an intensification of production and export, leaving Tibet with the wastes inherent to the mining and processing of these minerals. At a time when China tells the world how deeply it cares for Tibetan wildlife and pristine landscapes, and pays eco-compensation to Tibet to offset emissions elsewhere, the irony is that Tibet could be destroyed in order to save it.



Under ['retire livestock to grow more grass'] policy, the government has fenced almost 50 percent of the traditional grazing land, drastically reducing the availability of grass for the herds. The nomads are encouraged to set a limit on the numbers of yaks, especially male yaks, they could own.

Interviewee 5, Dzachukha, Sershul (Ch: Shiqu) County, Kardze (Chinese: Ganzi) Tibetan Autonomous Prefecture

The party-state's presence is pervasive, orchestrating all of these strategies. That raises questions about Beijing's marked preference for market-based carbon emissions trading and eco-compensation. What does market-based mean when the party-state wields its allocative powers so strongly, to pick winners, favour its favorites, dominate financialisation and insist on active CCP involvement in management decisions, as well as directly owning nearly all the big production companies. Why, given the omnipresence of the party-state, does it not simply decree who shall reduce emissions by how much, or impose a direct tax on emitters.

If China were to deploy the power of its authoritarian style, and directly tax polluters, there would be none of the charade of pretending to pay rural Tibetans for their provisioning of ecosystem services. A carbon tax, as many economists argue, imposes direct costs on polluting corporations that impact the bottom line. Taxing carbon makes a vague, seemingly hypothetical externality into an internality within the corporation's accounting, directly restricting profits. Internalising what has up till now been brushed aside as a distant problem best left to the future, makes it a cost here and now, giving emitters real incentives to actually reduce emissions. That is why economists so frequently advocate for them.

China could impose rules and regulations and carbon taxes more readily than other industrial nations, because China's party-state has the power, and the precedents for such redistributive interventions that achieve the transition from the old fossil fuel intensive economy to a new era. Yet China remains officially committed to market-based solutions, even though there is nowhere in the world where they have achieved much.

A carbon tax could direct the substantial revenues it raises to compensating those who actually do protect the environment; or it could reimburse consumers for the extra costs they pay when electricity and fuel bills rise to pay the carbon tax. Either way the connection between cause and effect is straightforward, with none of the obfuscation of market-based payments for ecosystem services that in practice disempower and displace Tibetan nomads.

Conclusion

China's policy responses for climate change mitigation and adaptation undermine sustainable development and traditional livelihood sources on the Tibetan Plateau. Relocating and resettling nomadic pastoralists from highlands to heavily surveilled urban fringes means an end to collective ownership of upper pastures as common pool resources managed by customary decision making. Drastic changes in nomadic livelihoods require Tibetan nomads to move close to urban centres, look for employment albeit unsuccessfully in towns as they lose land tenure security, food security and a host of other collective rights.

China's climate change policies are designed to promote the government's agenda of changing the traditional mode of pastoral development in favor of an intensive, market-based economy that fails to encourage long-term livelihood resilience among the affected communities. Nomadic pastoralists are already vulnerable to climate induced disasters and calamities, the frequency of which has only accelerated in recent years. As if this is not enough, official policies aimed at environmental conservation prevent Tibetan nomads from pursuing a sustainable

livelihood and exercising autonomous agency, which is the foundation of human rights and personal dignity.

While China's policies may be well-intentioned, albeit ill-advised and lacking a multi stakeholder approach based on human rights standards, they have perverse and detrimental impacts on sustainable livelihood sources, which has further intensified the severity of poverty and inequality conditions in Tibet.

Eco-compensation policies must be inclusive in nature and recognise the role of local nomadic communities in pursuing sustainable and productive livelihood sources. With local communities as primary and direct beneficiaries of any payment for ecological services programs, such contractual agreements must empower local communities by respecting their human rights including land tenure security and freedom from forced removal from their ancestral lands.