WASTED LIVES:

A Critical Analysis of China's Campaign to End Tibetan Pastoral Lifeways

Tibetan Centre for Human Rights & Democracy

May 2015

Table of Contents

Introduction:
A Snapshot Of The Present Moment

One hundred years ago the villagers of the Kumaon Himalaya, in northern India, set fire to their forests. So determined were they to burn the forest, every time the fires were extinguished, the villagers relit them.

They burned their forests because those forests were no longer theirs. The British Raj had declared them the property of the state, to be managed rationally and scientifically by regulations intended to maintain a logical balance between timber production and conservation. In the eyes of the regulators, the Kumaonis were an untrustworthy, unreliable, irrational, predatory population who showed no respect for the law, persisted in gathering from the forest as if it was still theirs, who needed to be governed by strict law enforcement to induce them to obey the new science of forest management.

The fires of 1916 were the culmination of a village disobedience campaign against the hauteur of the Raj. Villagers refused to inform on those labelled criminals by the state. A famous Indian environmentalist, Arun Agrawal, has recently reminded us of this story: *"In direct violation of the new rules, villagers grazed their animals, chopped and collected firewood, felled timber and harvested fodder. They had always done so. But the new restrictions and enforcement had criminalised everyday behaviour by making illegal a range of what might be called customary uses of forests. By simply continuing to do what they had always done, villagers committed acts that had become illegal."*[1]

Thus far, the parallels between the Kumaonis and the Tibetan pastoralists are strong. It took 50 years of British forest regulation, applied more and more strictly, before the Kumaonis burned the forests. It has taken 50 years of China's statist interventions in the grasslands of the Tibetan Plateau to reach the current crisis, in which hundreds of thousands of pastoralists are being removed from their ancestral pastures, in the name of conservation, and objective scientific necessity.

The Kumaon forest department had been created back in 1860, but had little capacity to enforce regulations and in practice tolerated villagers who continued to treat the forest as theirs, even if their acts were technically illegal. But 50 years later, the Raj asserted its authority more forcefully: *"Reclassification, further new regulations, and stricter implementation in the second decade of the twentieth century were an unprecedented intrusion into the villagers' daily lives that they could not endure."*Despite having *"carried out surveys; demarcated different categories of forests; made working plans for planting, management and rotational harvesting of trees; limited grazing by domestic animals; restricted collection of fodder and firewood; and introduced fire protection*", it all went up in flames.

China today positions itself as protector of grasslands that the customary grassland users have failed to protect, from which they are now increasingly removed. China now busies itself with designing, engineering, building and constructing new national parks in the pasturelands, energetically applying accumulated scientific data to the problem of modern management of areas so evidently managed poorly by ignorant "herders." There are parallel between British India a century ago, and contemporary China.

In 1916 the bureaucratic British then remembered they are also a pragmatic people, who had no intention of settling millions of English in India. The British learned a lesson the hard way, but they learned it well. They set up a Kumaon Forest Grievances Committee of three men who *"toured the entire region and interviewed nearly five thousand*

1 Arun Agrawal, Environmentality: Technologies of government and the making of subjects, Duke University Press, 2005; Oxford India 2006, 4-5

*villagers. Afterward it recommended that the government should permit villagers to take formal control over most of the forests. It also suggested that villagers should be permitted to govern their forests under a general set of framing guidelines. The colonial state accepted these recommendations. The consequences have endured. Kumaonis have formed more than three thousand village-level forest councils to govern their forests."*As a result the descendants of Kumaonis who burned the forest are now its ardent protectors. Prof. Agrawal describes their attitude as environmentality.

There is much evidence that now, on the grasslands of Tibet, 55 years after China asserted control of the lives of the pastoralists and their production landscapes, the state has constituted a complex regulatory regime governed by a long list of laws and official diktats, and a new Main Functional Zoning system which push and pull pastoralists in contradictory directions, while characterising their traditional mode of production as wasteful, unproductive and destructive of the environment.

This report investigates whether a similarly fresh turn of mind is in the offing in China. New voices are emerging, both among Chinese scientists noting past policy failures, and from a new generation of articulate Tibetan researchers who propose positive alternatives. A new paradigm of grassland management is in the offing, which promises better outcomes for conservation, carbon capture, rehabilitation of degraded areas, sustainable livestock production and pastoralist incomes.

READING THIS REPORT

This report is an extended analytical essay, on the perverse outcomes of statist interventions into customary land management practices over a huge area that has been managed sustainably and productively by Tibetan pastoralists for 9000 years. Building on the many reports on sedentarisation, and removal of pastoral nomads from their pastures, this report takes a wider perspective, seeking to understand how the current collapse of the pastoral mode of production came about, and what the future prospects are for the depopulating pastoral landscapes of the Tibetan Plateau.

While thoroughly referenced, this is both a descriptive report and an analytic synthesis of the reasons underlying the accelerating demise, in many Tibetan areas, of pastoral lifeways.

This report tracks the history of China's gaze over the grasslands, encouraging the reader to learn to see like a modern state seeking to establish its presence on vast production landscapes where there had never, until the 1950s, been a presence of Chinese power on the ground.

This report traces an arc of Chinese "grass industry" policy (to use China's terminology) as it shifted gradually from a productivist ideology aimed at producing more meat, to a conservationist ideology today, while never cancelling the institutions, regulations, incentives and interventions that require Tibetan pastoralists to intensify production. The nomads are caught in the ongoing tension between productivism and conservation, both of which impose costs on them, reduce their options, and induce their slide into poverty.

This **INTRODUCTION** frames the historical, economic and development debates of the chapters, by turning to the arrival, in Tibet, of a new pro-pastoralist paradigm for pastoral landscapes and livelihoods. This emergent paradigm may be able to achieve what pastoralists want: decent lives and incomes, and cultural maintenance. It may equally be capable of achieving what official policy seeks but has been unable to attain: productivity, conservation of biodiversity, carbon capture, rehabilitation of degrading watersheds and poverty alleviation. This is a hopeful sign.

CHAPTER ONE extends the snapshot of the current situation, the extent of grazing bans, sedentarisation, and some of the assumptions made by official China about mobile pastoralism as a primitive mode of production. This is part of the deeper backstory behind current policies.

CHAPTER TWO examines China's policies, laws and official decrees governing the grasslands and the lives of the pastoralists; the competing ideologies of productivism and the more recent emphasis on protection of landscapesintended to provision lowland China with water from rivers originating in Tibet.

CHAPTER THREE explores the outcomes of these policies and official ideologies: the concentration of herds and herders in small parcels of land, the onset of degradation, the extra costs borne by pastoralists for compliance with official policies, and their descent into poverty.

CHAPTER FOUR shifts perspective, looking at the production landscapes of the Tibetan Plateau through Tibetan eyes, at the named pastures, traditional economy, relationships with nature and attitudes to herd animals as fellow sentient beings.

CHAPTER FIVE focuses on the 21st century shift to official policies prioritising conservation, nature reserves, watershed protection and thus the loss of land tenure rights for the pastoralists, grazing bans and the removal of many to peri-urban concrete settlements

CHAPTER SIX goes deeper into the backstory of China's embedded sedentary bias and civilising mission on the grasslands.

CHAPTER SEVEN looks ahead to new alternatives that are more holistic, based on the whole landscape approach.

GRASSLANDS: A MAJOR GLOBAL ECOSYSTEM

Why grasslands exist is not a question that has much concerned China, which is routinely focused on its arable lands suited to intensive cropping, while considering its far greater grasslands as waste land that produces nothing, or next to nothing. Although China today has the biggest grasslands of any country worldwide, their existence prompts none of the wonderment that forests attract. Yet grasslands exist between the forest, on one hand, and the bare mountains above. Grasslands flourish where there is insufficient rain to sustain bigger plants, but conditions are not so severe that nothing can grow. The grasslands of the world have evolved over a very long period, co-evolving with the ungulates and other animals that eat the grasses.

This has been much studied. Why and how and when did so much of the planet come to be grassland?[2] How is the evolution of grassland connected to the evolution of grass eaters, notably the evolution of the specialised grass cutting teeth of the herbivores, big and small, that cluster in herds out on the open prairies and pastures?[3] The uplift of the Tibetan Plateau fits into this story, creating, in the heart of the Eurasian continent, a vast grassland where forest cannot survive, due both to the cold climate and the meagre rainfall on a plateau China puzzlingly calls its' number one water tower.

The reality is that China's grasslands, including Tibet, are the more arid part of China, though not as dry as deserts in districts of Inner Mongolia and Xinjiang. It is equally a reality that on the grasslands, not only do the herbivores need grass, the grasslands also need the grazing pressure of the herbivores, to maintain biodiversity and a healthy, sustainable grassland. This is a basic truth that has eluded China. As a result, the massacre of wildlife during Mao's war on nature, and the slow recovery of wildlife numbers in recent years get little attention, and the significance of their

2 Caroline A.E. Stromberg, Evolution of Grasses and Grassland Ecosystems Annual Review of Earth and Planetary Sciences, 2011. 39:517–44

3 Eronen JT, Puolamaki K, Liu L, Lintulaakso K, Damuth J, et al. 2010a. Precipitation and large herbivorous mammals I: estimates from present-day communities. *Evol. Ecol. Res.* 12:217–33
Phillip E. Jardine, Christine M. Janis, Sarda Sahney, Michael J. Benton; Grit not grass: Concordant patterns of early origin of hypsodonty in Great Plains ungulates and Glires; Palaeogeography, Palaeoclimatology, Palaeoecology 365–366 (2012) 1–10
Pagani M, Caldeira K, Berner R, Beerling DJ. 2009. The role of terrestrial plants in limiting atmospheric CO_2 decline over the past 24 million years.*Nature* 460:85–88

absence from the grasslands is not noticed by China's policy makers.

China is committed to drawing exclusionary red lines round the best pastoral meadows in Tibet, proclaiming them protected areas that may eventually attract payments by polluters worldwide to offset their ongoing pollution, thus winning China credit for acting resolutely to protect the environment. China persists in burning more coal than the rest of the world put together. Within the red lines grazing is banned, in some areas all human activity, on paper, is permanently banned, but in practice, miners move in. Official China has convinced itself that this path of displacing pastoralists in the name of conservation is correct, and that, to quote the title of an April 2015 State Council White Paper on Tibet: *"Tibet's Path of Development Is Driven by an Irresistible Historical Tide."*[4]

This report also looks ahead to the forward momentum of China's embrace of the Tibetan Plateau as its primary site for conservation of watersheds, capture of carbon and protection of pristine grassland wilderness; all of which require pastoralists to lose land tenure security and move to concrete block housing on urban fringes, no longer leading the skilled and productive lives of extensive land managers, but with no vocational entry into modernity either.

TIBETAN PLATEAU PASTORALISM: THE DEBATE SO FAR

Much in this report is original, in its evidence, arguments and conclusions. It is original in making full use of Tibetan, Chinese and global scientific and field accounts of what is actually happening on the ground. It is original in arguing against both dominant narratives.

China argues that grazing bans and exclusion of nomads from pastures are inevitable, scientifically necessary outcomes of **careless overgrazing by ignorant nomads**, who have caused dangerous degradation of soil and the watersheds of China's great rivers.

Publications by Tibetans and Tibet movement supporters accuse China of a deliberate policy of **genocide, a calculated assault** on the entire nomadic way of life, part of a wider program to destroy Tibetan culture and society.

1. This report takes a fresh stance, grounded in a detailed retracing of how the program of closing pastures, cancelling pastoral land tenure rights and removing pastoralists to distant settlements came about. It tracks the **twists and turns in China's policies** for the grasslands, initially aproductivist dream of making more meat for a protein-hungry China; gradually shifting over decades to an agenda of sustainability, especially the desire to protect the watersheds of the great rivers, for the benefit of downstream China.

2. Official China created many laws, edicts and bureaucracies to both boost production and later to draw red lines round the best meadow pastures of Tibet, in the name of sustainability. These institutions were created without any consultation with the pastoralist users of the grasslands, or any recognition of their intimate understanding of rangeland dynamics. This report shows the many **unintended consequences of this top-down extension of state power** onto unfamiliar rangelands. Both the programs to intensify production and the conservationist sustainability programs have produced two key perverse outcomes: degradation of land, and impoverishment of the pastoralists.

3. Both standard narratives are thus highly questionable. China says grazing bans, pasture closures and nomad removals are an **objective scientific necessity** in order to grow more grass, capture carbon and protect watersheds. This report, making much use of Chinese scientific research, shows that China's definition of degradation includes normal grazing pressure as degradation, varies wildly in its estimates of the extent of degradation, and offers no pathway that causally connects exclusion of grazing animals to restoration of a

4 http://www.china.org.cn/china/2015-04/15/content_35325433.htm

grassland wilderness. China has failed to enlist the time and knowledge of the pastoralists to do the landcare work of rehabilitating degrading areas, relying instead solely on exclosure and time to achieve rehabilitation. This is contrary to experience worldwide in community based landscape restoration, which relies on local communities to lead the recovery process. China's policies have swung between extremes. Revolutionary communisation of all pastoralists utterly disempowered the nomads; then, in the 1980s, China went to the other extreme, and made each individual pastoral household legally and contractually liable for a small, allocated block of land on which to raise the entire herd for most of the year; while the commonly owned summer pastures were in a legal limbo, with unclear rights and little opportunity for pastoralists to make group decisions, in the traditional tent-circle, about best land and herd management practice. Thus the accelerating exclusion of pastoralists originates in successive policy failures.

4. The dominant exile narrative assumes deliberate malign intent, by a monolithic China, to **destroy the pastoral mode of production,** to empty the land so that a vast plateau without resident defenders will be given over to rapacious minerals extraction. Like China's official narrative, this is a coherent and compelling story, but both are gross over-simplifications. China is not monolithic, its desires, as the state extends its gaze into rural Tibet, are many and contradictory; its institutions, laws and edicts at odds with each other; its ignorance of pastoralism and wise stewardship profound. Exile narratives ignore the pull factor: the seductive attractions of urban consumer modernity.

5. In neither the official Chinese version nor exile tellings do the **voices of Tibetan pastoralists** come across clearly, often not at all. This report features the voices of the nomads, not only on the grazing bans but also on reactions growing in popularity, including a movement to withhold animals from the commercial market, contrary to China's ongoing productivist agenda.

6. Exile Tibetan reports on this issue seldom make use of Chinese sources; China's policy statements fail to acknowledge anything other than Chinese sources, yet ignore the growing number of Chinese scientists and social scientists who point to past policy failures as the driver of degradation. This report **makes use of a wide range of available sources**, in English, Tibetan and Chinese.

7. The result of these competing narratives has been a sterile, inconclusive debate about the specific process of nomads leaving their land: is it **voluntary or involuntary**? China insists that all who abandon their pastures are voluntary "ecological migrants" altruistically surrendering grazing rights for the benefit of the planet. Exile authors depict the removals as coercive and forcible, ignoring the many reasons pastoralists, especially the poorest families, find a provisional move to be close to a town acceptable. Complex human reality defies simplistic assumptions.

8. This report is original in that it **looks to likely future scenarios**, of further exclusion of nomads, more red line protected areas from which grazing is excluded, intensification of meat production in feedlots on urban fringes, all making the pastoral lifeway redundant, and the land empty. In future China may be able to plug into a global emissions trading regime that will pay for Tibetans to stay away from their pastures, leading useless lives in peri-urban cinder block settlements under close official scrutiny. China has discovered conservation as a rhetoric that justifies exclusion of pastoralists from pasture, and much of the conservation movement worldwide, in its databases of protected areas, accepts China's arguments unquestioningly. In the longer term, China expects the displaced nomads to become factory workers in distant cities of western China, at a time when major manufacturers are relocating from China's coast to the deep inland.**The alternative future scenario is of a paradigm shift** to a pro-pastoralist understanding of grassland dynamics and the skilful mobility of the pastoralists as they key to resolving problems of degradation, productivity and landscape protection.

9. This report is original in that it **does not separate the deep religiosity of the pastoralists from everyday economic concerns.** Although it is well known that Tibetan nomads are deeply religious, Tibetan religion is

usually treated as a realm unto itself, dealing only with philosophical questions of the meaning of existence, in monastic institutions. These days, the most charismatic of lamas and khenpos have much guidance for everyday conduct of pastoralists, and the human waste of lives in concrete settlements with nothing to do and no entry point into the modern cash economy.

10. This report is original, in **situating pastoral Tibet in the global debate** about sustainable development goals, food security, land grabs, livestock keepers' rights, displacement by conservation, the merits of top-down biodiversity protection versus indigenous and community based conservation, conservation of whole landscapes rather than just a few iconic speciesF, and other contemporary debates about the way ahead for a planet struggling to cope with climate changes, weather extremes, hunger, accelerating extinctions of wildlife species, and a China that is determined to consume resources as intensively as the richest countries, in order to realise the "China Dream."

11. This report is optimistic about **the prospects of a new paradigm for the pastoral lands of the Tibetan Plateau**, based on new thinking worldwide about the capabilities of mobile pastoralism to achieve goals of biodiversity conservation, production and enhanced livelihoods, better than the current statist model, in drylands where uncertainty is the norm and the strategy of mobility is the key.

WHO SHOULD READ THIS REPORT?

Those who seek a clearer understanding, beyond claim and counter-claim of what is happening on the ground in Tibet, will find a wealth of new material in this report, new perspectives and new possibilities.

The **human rights** community will find examples of the collective rights of peoples, especially their social and economic rights, undermined by failure to seek and obtain free, prior and informed consent to the urban relocation of nomads, who have little choice but to comply with official quotas and directives. This is a case study in internal displacement.

Students of **governance**, policymaking, and institutional design will find case studies here that can be used in many policy contexts. Governments worldwide, which govern pastoral populations, will find here case studies of drylands in chronic disequilibrium, inhabited by pastoralists whose genius is to live off uncertainty, whose mobility has long guaranteed sustainable land use.

Conservationists will find a challenge to familiar categories and methods of declaring areas protected, and the assumption that official protection by exclusion is necessary to biodiversity conservation.

Economists of neoliberal market and planned command economies will find evidence in this report of a new hybrid, which is both market and command, both dirigiste and driven by price signals. **Development economists** will find case studies of China's failure to add value to the wool and dairy products the pastoralists produce in abundance, or to link the pastoral economy to the modern urban economy. **Corporations** inclined to invest in emissions offsetting programs of payment for environmental services (PES) or reducing emissions from deforestation and degradation (REDD) will find here salutary illustration of the complexity of choosing the right partners.

The **development** community will find salutary case studies of disempowered development with perverse outcomes, and the prospect of bringing successful farmer-first rural development models to Tibet to resolve the present decline. Since poverty has been the unnamed, unseen driver of the decline of Tibetan extensive pastoralism, income-generating projects based on the strengths of Tibetan comparative advantage in wool and dairy production –both in great demand in China- have great potential as poverty alleviation strategies.

Buddhists will find evidence of the renewed relevance of the Buddhist teachers, in the remotest pasturelands, as nomads struggle with the attractions, and downsides of urban modernity, and seek spiritual guidance.

Pastoralists worldwide will find Tibetans actively joining the global movement for a new pro-pastoralist paradigm that speaks up for the values of mobility and livestock keepers' rights.

A WAY FORWARD

This report offers a way ahead. It is not too late to try new approaches, such as establishing pasture user groups and herder cooperatives empowered to decide land use; community-based natural resource management; restored land tenure security; restored mobility to ease grazing pressure and degradation; plus livestock disaster insurance to incentivise pastoralists to reduce herd size.

Nor is it too late to recognise that the extensive land use system of the Tibetan pastoralists remains a viable, productive and sustainable mode of production suited to the extreme environmental conditions in Tibet. Mobility is modern.

China is stuck in a time warp, seeing nomads only as backward, primitive, ignorant folk whose lives are little better than the animals they follow, who are to blame for the degradation of the grasslands. The rest of the world has moved on, having awoken from this negative attitude, which once was prevalent among urban elites, in the countries that design and fund the aid projects.

Now, in a new paradigm, the nomads are recognised as being at the forefront of environmental solutions, not only to local problems but the planetary problem of climate change. China needs to catch up with this shift in global thinking.

Policy makers, development agencies and scientists have for decades seen pastoralism as an inefficient fringe, between the desert on one hand and the stable agricultural heartland on the other. The pastoralists have been depicted as poor and illiterate, somehow making their living haphazardly searching for grass for their animals, but always vulnerable to drought and other disasters, and always in danger of exploiting the land beyond what it can bear. It has been easy to blame pastoralists all over the world, in Africa and the Middle East especially, for desertification. This is a negative way of looking at mobile pastoralism as the poor and unreliable cousin of agriculture, which lacks the reliable rain, uniformity and stability of arable land.

But in the past 20 years, there has been a revolution in how to understand mobile pastoralism. It is a fundamental misunderstanding to apply models of equilibrium, stability, predictability and uniformity to the pasturelands of the world, because these inland drylands, in Tibet and elsewhere, are not only unpredictable, but the pastoralist strategy lives off uncertainty, flexibly utilising grass as it becomes available. Rather than eking a living despite uncertainty, the lack of equilibrium is the source of pastoral mobility and adaptability.

THE NEW PRO-PASTORALIST PARADIGM IN CHINA

The new paradigm is creating new science. It also creates rights specific to pastoralists, usually called Livestock Keepers' Rights, articulated after much debate.[5]

This shift in thinking, re-valorising pastoralists and pastoralism, is no longer new to China; in fact it has eloquent

5 Declaration on Livestock Keepers' Rights, http://www.pastoralpeoples.org/docs/Declaration_on_LKRs_with_initial%20signatories_6.pdf

advocates, in elite institutions in Beijing, who take every opportunity to press the case for a fresh approach, in venues such as World Bank conferences on land and poverty, and International Grassland Congresses.

At the same time, Tibetan pastoralists are taking initiatives to restore community-based management of lands and herds, experimenting with the ongoing relevance of customary social formations that have, over thousands of years, managed the risks of livestock production and the protection of pastoral production landscapes.

The combination of initiatives on the ground, in areas where grazing bans are not yet imposed, and professional circles in Beijing advocating a fresh approach, results in a steady stream of research reports alerting policy makers to new ways of achieving policy objectives. Through conferences and publications, through connections and careful documentation, central leaders now have new ways of fulfilling all three key grassland goals, of conserving watersheds, supporting productive livestock raising and lifting the incomes of the poor. To use a phrase in frequent use in China, they offer a way to "emancipate the mind" and adopt fresh thinking for sustainable solutions.

As these Chinese advocates of emancipating the mind say, academic researchers in the field, on the grasslands, are increasingly reporting evidence of successive past policy failures, building momentum for a paradigm shift. If and when that shift does occur, it will find popular support in urban China, among the newly wealthy, who love to see documentaries and glossy magazines extolling the beauty of the Tibetan pasture lands, and the romantic life of the nomads. One example is the October 2014 issue of *China National Geography* magazine: 400 pages of glossy supersaturated colour photos of Tibet with emphasis on the green meadowlands and the rugged faces of rural Tibetans.

The paradigm is shifting, yet China remains officially committed to the established norm that stigmatises the "herders" for ignorantly despoiling their own pasturelands and livelihoods. Ever since Thomas Kuhn depicted how scientific paradigms shift,[6] this has been a familiar pattern: the old paradigm remains securely in place, despite mounting evidence that points disruptively to a new normal, a new imaginary, new ways of accommodating the mounting evidence that the old paradigm cannot fit, or countenance. As in the neoliberal market economy, the disruptive innovator finally wins through, and suddenly there is a new normal, a phrase much used in China now that the decades of fast economic growth are slowing permanently.

That new normal may emerge from experiments being conducted in pastoral areas, trying to marry the dominant neoliberal market model with traditional Tibetan pastoral community based arrangements. Tibetan researcher Gonpo Tsering, of Peking University, describes the resulting hybrid: *"Firstly, clarifying and securing individual rights in rangeland management is important, but this doesn't mean that community organisations need to be dismantled, or that physical boundaries need to be built between households to clarify the rights. Secondly, there is room for more constructive interaction between local government, community and pastoral households in rangeland management practices."*[7]

Based on this optimistic prospect, Gonpo Tsering has found it possible to not only create new ways of managing the grasslands, but to show that they contribute effectively to achieving the shared goals of reducing grazing pressure, and increasing pastoralists' incomes, while conserving grass and preventing over-grazing. He explains: *"From our fieldwork, an alternative model that we've observed is the tradable grazing right system, which we termed the hybrid institutional system. The hybrid system considers both market-based and community customary institutions in rangeland management. In this system, herders converted the rangeland use-rights into grazing rights, which is determined by the total rangeland use-rights of a household divided by the total number that household owns in each year, so that they can enforce their rights for compensation. But at the same time, they maintain their collective use of rangeland resources so that they can move livestock around in a flexible way.*

6 Thomas Kuhn, The Structure of Scientific Revolutions, University of Chicago Press, 1962

7 How pastoralists innovate: stories from the highlands of China, Future Agricultures blog, 10 January 2015 http://www.future-agricultures.org/blog/entry/how-pastoralists-innovate-stories-from-the-highlands-of-china

"After these reforms, when the herders saw an increase in the market values of rangeland resources, they wanted to clarify their rights and set up market-based institutional arrangements to distribute their resources. But they didn't want to lose the community organisation and collective use of rangeland resources. So they set up diverse, hybrid institutional arrangements.

"The 'tradable grazing right system' is an example of this. The government had promoted rangeland use rights, but the community converted this into a grazing quota to clarify the grazing rights of an individual household. The grazing rights give individual households the right to claim compensation based on their annual grazing quota. At the same time, the herders maintain community customary institutions to enable livestock to be kept mobile tradable.

"In this case, customary and market-based institutions interact to form complementary and embedded relations which target different aspects of rangeland management. The constructive interaction between the local government, community and individual households plays a crucial role in developing and maintaining this institutional arrangement."

This intelligent adaptation meets the concerns of a state that wants to improve both productivity and sustainability. It meets the need of Tibetan pastoralists for a process whereby they can maintain incomes and mobile livestock production without costly and labour-intensive inputs that undermine livelihoods.

Gonpo Tsering was then able to make a comparison between the impacts of the Rangeland Transfer System based on the official allocation of land, family by family, under the Rangeland Household Contract System, usually requiring fencing and other new costs; compared with the new tradable grazing right market system. He explains*: "Our case study compares the economic and ecological outcomes in two pastoral villages in Qinghai Province. One village implemented a Rangeland Transfer System based on the Rangeland Household Contract Policy (RHCP). The other village initiated a tradable grazing right system.*

"We found different results in each village. Both systems increased livestock production costs. But the first village had higher livestock mortality and a lower livestock production level than the second. The second village also had higher household income levels, because the income is comprised of market-based income, consumption-based income and herd-size income. Their income also varied less from year to year."

This is a step forward for all stakeholders. By making grazing rights tradable within a pastoral community, costs are kept down, grazing pressure is reduced as flexibility and mobility are restored, livestock no longer die of starvation on allocated land as they waste away in winter and spring, and livestock production increases as animals are better able to reach new pastures to which herd owners have negotiated access rights. Thus not only do pastoralists gain more income, rather than the grind of getting poorer under previous official policies, they also have the security of having more than one source of income, a buffer against risk and unpredictable climate. This is the classic win/win that policy often strives for, but, on the grasslands, struggles to attain.

This contemporary hybrid makes full use of the traditional capacity of Tibetan pastoralists to know their pastures, the lie of the land, the names and locations of each pasture, and agree on who gets to graze where, without the extraordinary expense of fences, and the fragmentation they bring, and the frequently bitter arguments when stock push over flimsily erected fences and wander.

In these ways, a new paradigm is born, with classic Tibetan pastoralist characteristics. But the old paradigms, as Kuhn reminded us back in 1962, hang on, institutionally entrenched, and seldom yield just because the latest evidence suggests a better way.

Until there is a critical mass of new evidence contradicting the established paradigm, old thinking remains in place, seemingly incontrovertible to those wedded to it. In a system averse to considering alternative explanations for degradation, such as successive policy failures, the delay in emancipating the mind is protracted. Yet Chinese researchers increasingly sum up the fieldwork on official grassland policy, calling it ineffective, negative and improper.

At the 2015 World Bank conference on land and poverty, a team from the Peking University College of Environmental Science presented their findings, in a session of five presentations, all focussed on land tenure in China. Led by Prof Li Wenjun and Tibetan scientist, Gonpo Tsering (Gongbuzeren in Chinese) they reported that: *"academics increasingly report negative impacts of RHCP on the aspects of ecosystem, animal husbandry, pastoralist livelihoods and pastoral society; and increasing scholars even though not the majorities yet, attribute the negative impacts to improper policy itself instead of incomplete implementation. Regarding the RECPs, most academics believe that the policy have improved rangeland ecosystem, but with obvious negative impacts on pastoralist livelihoods and pastoral society, and attribute the problems to incomplete policy implementation. For the NSP, majority of academics report positive impacts on pastoralist livelihoods and animal husbandry, though recent researches have identified negative impacts on pastoral society and ecosystem. Even though not the mainstream perspectives, increasing academics attribute the negative impacts to improper policy."*[8]

That is their summation of the impacts of the three key top-down policies imposed on the grasslands: Rangeland Household Contract Policy (RHCP), Rangeland Ecological Construction Projects (RECPs), and the Nomad Settlement Policy (NSP). The evidence of negative impacts of improper policy is stronger for the first two of these policies, as they have been implemented over decades, while the Nomad Settlement Policy is newer, having been announced in 2003, and its implementation till now only partial.

SUBALTERN TIBETANS SPEAK UP

This team of China's pro-pastoralist investigators, led by Prof Li Wenjun has for years skillfully gathered evidence, won grants and support of global donors such as Ford Foundation, presented their case at conferences around the world, such as World Bank 2015, International Grasslands Congress 2014, Institute of Development Studies 2014, International Institute for Environment and Development 2014, and a workshop in Kenya in 2012 which was an opportunity to encounter pastoralists from Kenya and India.

Prof. Li Wenjun leads a team that has done deep fieldwork out on the grasslands, initially in Inner Mongolia, more recently in Tibet. Gonpo Tsering is from a nomadic family in Derge, in eastern Tibet and has done detailed fieldwork in Trika county, Amdo (Guinan county, Qinghai in Chinese) His dissertation, freely available online,[9] not only monitors closely the impacts of current policy, on the pasture land and on pastoralist livelihoods, among people he knows, but he also reports on local experiments in restoring community-based pastoralism by adapting official policy for outcomes that are better both for the land and the people.

Tibetan pastoralists, having experienced the extremes of neoliberal individual family land tenure contracts since the 1980s, and the opposite extreme of total command and control communisation in the decades prior to the 1980s are now quietly, wherever possible, reverting to customary community based management. Finding from experience that both extremes are costly, to land and livelihoods, they get on with the traditional mode of livestock production based on the tent-circle (*rukor* in Tibetan) which pools the accumulated knowledge of 10 to 70 families, and often pools the herds as well, enabling larger, more efficient, specialized herds separated by age, gender and suitability for different pastures.

They have gone back to these informal co-operative arrangements where possible because the alternatives imposed from above by central authorities are just too costly. Now, for the first time, there is a convergence between the experience of the privatized, individualized, neoliberalised pastoralists, and what Chinese scientists have found. The 2015 survey of all Chinese grassland policy science concluded that: "60% of the papers reported a decrease in

8 *Gongbuzeren, Li Yanbo and Li Wenjun;* **China's Rangeland Management Policy Debates: What Have We learned?***Annual World Bank conference on land and poverty 2015: Linking Land Tenure and Use for Shared Prosperity; https://www.conftool.com/landandpoverty2015/index.php?page=browseSessions&form_session=243&presentations=show*

9 www.case.edu/affil/tibet/.../GongboTserings_thesis_paper.doc

pastoralist livelihoods (at least in short-term) because of the increasing costs and labor requirements for livestock production; and living costs were much higher than when they lived in their former pastoral area. As a result, the poverty increased."[10]

A new paradigm is waiting, ready to make sense of the paradoxes of the old: why does the rangeland continue to degrade, and the pastoralists get poorer, despite decades of energetic statist interventions intended to boost productivity, raise incomes, protect fragile landscapes, conserve biodiversity and modernize remote areas?

TIME TO HIT THE RESET BUTTON

China has failed to keep up with the new paradigm. China is invested heavily in an agrarian view of the land, which privileges arable land above all else. China frequently proclaims as one of its successes that it feeds its people despite having only limited arable land, ignoring its far larger pastoral lands. If China were to include all its production landscapes, arable and pastoral, it would lose its claim to special success despite poor natural endowment. China would instead have to come up with an integrated approach, which recognises what is special, and productive, about its grasslands as well as its farmlands, and why mobile pastoralism is best suited to the unpredictable rangelands.

It is time for a rethink, for China to catch up with what the UN Development Programme (UNDP) calls the new paradigm.[11] That will mean dropping the inbuilt agricultural bias, which sees pastoral lands as inferior and unproductive; and the ingrained habit of applying agricultural solutions and imposing agricultural institutions on the rangelands of China.

The UNDP's new paradigm challenges the old paradigm that assumes drylands pastoralists are to blame for degradation*: "On the rangelands, an outsiders' polemic of degradation, assumed to be driven by overstocking, has been based on the concept of equilibrium – a theoretical carrying capacity. It argues for stocking levels to be controlled at the maximum supportable in the driest years. This ignores the key strategy of herd mobility. But from Africa to Central Asia, seasonal transhumance and year-round mobility have provided herders with a defence against disequilibrium, uncertain rainfall and pasture productivity. Opportunistic stocking strategies with associated risk-bearing make good economic sense in such an environment.*

"Governments have been very slow to recognise the rationale of pastoral mobility and its implication – that over-grazing is caused by impeding movements with barriers, boundaries and regulation, rather than by allowing moving herds to redistribute grazing pressure and thereby better conserve the ecosystems.

"The necessity for a 'people-centred' model is widely conceded. Hitherto development was understood to be conditional on achieving environmental sustainability. Thus technical approaches dominated donor and government concerns. But the resilience paradigm reverses this dominance in favour of development as a condition for sustainability.

"Thus the misguided idea of a fundamental trade-off between development and sustainability has been exposed by the achievements of dryland people themselves. Their 'success stories' are replicable, given an enabling policy environment. Development emerges as the key goal, not only in poverty and risk reduction, but also in reversing degradation.

"Herders and farmers have been accused of causing land degradation through over-grazing, over-cultivation, and deforestation. However, decades of unsuccessful attempts to transform them have forced a re-evaluation of these

10 Gongbuzeren et al., China's Rangeland Management Policy Debates, World Bank, 2015, 9

11 Dryland Opportunities: A new paradigm for people, ecosystems and development, International Union for Conservation of Nature, International Institute for Environment & Development, United Nations Development Programme, 2009 https://www.iucn.org/about/union/secretariat/offices/esaro/resources/publications/?uPubsID=3920

systems. Mobile pastoral systems are found to be compatible with biodiversity conservation and sustainable ecosystem services.

"The mobile livestock herding systems were once a target for cattle ranching or 'controlled grazing' schemes. These were tied to the idea of 'carrying capacity' – the largest number of weighted animal units supportable through low rainfall years – in a bounded area. However, it was shown conclusively that mobile herding is more productive than ranching because it permits better use to be made of feed resources that are highly variable in time and space. African evidence indicates that such opportunistic grazing systems give better economic returns per ha than livestock reared under ranching conditions.

"Drylands in poor countries are 'investment deserts', except where valuable minerals have attracted inward (and short-term) investment. Because of their risky climates and low bio-productivity they need inward financial flows if they are to achieve their potentials. But dryland regions in countries such as Argentina, Australia, Israel, and the USA stand in sharp contrast, having benefited from higher capital investments. Their relatively advanced development provides the strongest evidence that drylands need not be poor.

"The 'investment desert' – as noticed above – cannot bear fruit without investment and much of this must come from external sources – government, donors, NGOs and the 'private sector'. This is because for decades, drylands have exported their human, social and financial capital to urban areas or regions offering a less erratic return.

"Pastoralism is fundamental to the well-being of millions of drylands people. Pastoralism differs from farming in two important respects. First, all available and suitable rangeland is normally in use, so no extending of pastoral territories is possible. This applies to virtually all of the worlds' drylands. The situation is aggravated by the loss of land to competing uses (farming and urbanization). Second, pastoral production systems are labour-intensive and involve the investment of human and social capital in institutions and management. Grazing systems balance fodder and water availability with the capacity of animals to undertake often arduous daily journeys. It has been shown that such systems, despite the hardships imposed on their users, are more efficient in their use of natural resources than alternatives. This fact is unfortunately lost by those who advocate 'modernization' in the form of large-scale ranching, a type of investment once favoured by donors who took their lead from capital-intensive systems in developed countries.

"Given the values of animal husbandry – and constantly buoyant meat prices driven by urban demand – livestock and pastoralism are well worthy of both private and public investment; but not at the price of ill-advised transformations."[12]

This shift in thinking came about the hard way. For decades it was "common knowledge" that pastoralists are to blame for the advance of the Sahara desert across Africa. Projects built on that premise usually failed; only making desertification worse. Gradually, greater respect for the indigenous knowledge of the nomads emerged, and a questioning of the scientific assumption that all ecosystems must, by definition, be in equilibrium.

A FRESH START ON CHINA'S GRASSLANDS?

Can China similarly go back to the drawing board, and learn from Africa, learning to see its nomads anew? By now there are long established Chinese grassland institutions, government departments and bureaus, and scientific research institutes all with a vested interest in their scientific superiority over the primitive nomads.

This disruptive new paradigm was a long time coming. For decades, projects aimed at modernising the pastoralists and the grasslands had failed, yet central governments seldom learned from each other's mistakes, and kept on

12 Dryland Opportunities: A new paradigm for people, ecosystems and development, International Union for Conservation of Nature, International Institute for Environment & Development, United Nations Development Programme, 2009 http://www.iucn.org/about/work/programmes/ecosystem_management/about_work_global_prog_ecos_dry/?uPubsID=3920

restricting nomadic mobility, encroaching on pastoral land, intensifying production and under-investing in pastoral systems, nowhere more so than in China.

Some saw the ecological disaster coming, as China insisted on making all the mistakes that the Soviet Union and its Russian successor made, going from the extreme of communisation to the opposite extreme of privatising herds with each household an independent business enterprise, bypassing the customary community group herding traditions. Two noted experts on the Siberian and Mongolian steppes, Caroline Humphrey and David Sneath warned, in 1999 what would –and did- happen in China as a result of constricting nomadic mobility: *"It is dismaying that Chinese policy for Inner Mongolia envisages measures that are similar in some respects to those which have had such disastrous results in Russia: introduction of 'improved' (more productive) breeds, use of heated winter sheds, development of fodder agriculture, and a less mobile, more static organisation of pastoralism in general. Pasture degradation is associated with the loss of mobility in pastoral systems. One of the effects of privatising livestock has been to reduce the amount of movement undertaken by many pastoral households. In Mongolia in the past, in both the pre-revolutionary and the socialist period long migrations were used as a strategy to increase pastoral production. This argument challenges the stereotypical view that seasonal migration is merely a 'primitive survival technique', and that the only way to improve pastoral production is to reduce mobility."*[13]

Two decades ago, in 1996, anthropologist Dee Mack Williams warned that: *"Contemporary pastoral residents of eastern Inner Mongolia now find themselves caught between a mobile past and a sedentary future, living within the expanding insecurities of an unsustainable present. Anxiety feeds from many sources, but ultimately derives from two related processes: a declining natural resource base threatened by shifting sand dunes and population pressures, and the disruptive influences of recent government initiatives to 'rationalize' animal husbandry production. For the present generation, no change has been more disruptive than the unfamiliar spatial discipline which a government-directed enclosure movement has introduced on national rangelands over the last fifteen years."*[14]

The new paradigm challenges these old orthodoxies, disrupting what had seemed certainties, which privileged datacollected by satellite remote sensing,over the ground truths of the nomads out in their pastures. Here is Saverio Krätli, another voice of the new paradigm:

"Pastoralism is still largely seen as a coping strategy that allows herders to get along with an 'inadequate' resource base. However, pastoralism is better understood as a sui generis production system that deliberately exploits the transient concentrations of nutrients that represent the most reliable feature of dryland environments; a system geared at maximising the production of economic value while stabilising its performance in environments where 'uncertainty' is harnessed for production.

"Descriptions of pastoralism remain characterised by narratives of deficit: resource scarcity, difficulty to adapt, struggle against droughts, diseases and insecurity. These narratives still shape the perspectives of development and policymaking, as well as much of academic discourse. An alternative focus on the most specialised and successful dryland producers leads to a different understanding of pastoralism, calling for a reconsideration of deficit narratives and the principles behind them. Pastoralists, like anybody else, operate within complex social and political systems: insecurity, poverty, access to services, markets, social capital or development resources, they all influence decisions about production. However, when dryland pastoralists are successful producers, they do so by exploiting asymmetric distribution, not stability and uniformity.

"Current resource-scarcity models of dryland environments, and implicitly the explanation of pastoral mobility as a 'coping strategy', still frame unpredictable ecological variability as unfavourable to production: environmental variability

13 Caroline Humphrey and David Sneath, The End of Nomadism? Society, state and the environment in Inner Asia, Duke University Press, 1999, 14, 292

14 Dee Mack Williams; The Barbed Walls of China: A Contemporary Grassland Drama; The Journal of Asian Studies 55, no. 3 (August 1996):665-691.

is a fundamental problem that pastoralists 'solve' by moving.

"Pastoralism [is] a high-reliability system, hence as a sui generis system of production, 'native' to structurally unpredictable environments and operating not by avoiding risk but by harnessing it as the very base of production. This line of thinking invites us to conceptualise nomadic pastoralism as geared towards the exploitation of asymmetric distribution (which is prevalent) rather than seeking uniformity and stability (which is exceptional). In other words, the unstable heterogeneity of dryland environment is not an obstacle to pastoralists: it is what they produce with. As we will see, this is done by systematically targeting and intelligently harvesting the transient concentrations of nutrients on the range. A production system does not need to work with uniformity and stability (that is, fit an equilibrium model) in order to be 'modern' (be it in the sense of 'rational' or 'technologically advanced'). As long as their specific requirements are respected, high-reliability systems can be modern and perfectly integrated into the market economy."[15]

The global environmental crisis is at the heart of this disruptive new paradigm. The pastoral drylands of the world, including the Tibetan Plateau, provide ecosystem services that are not improved by banning grazing. Michael Mortimore, author of the UNDP new paradigm report of 2009 points out that*: "cycling of soil nutrients, moisture and biological agents is critical to the productivity of the soils under cultivation, pasture, or natural vegetation. Biodiversity may be improved or reduced by grazing management. Although formerly blamed for desertification, grazing and animal impact can stimulate pasture growth, reduce invasive weeds and may improve mulching, and mineral and water cycling. Rangeland health and integrity are better where mobile pastoralism is practised. This allows recovery after grazing cycles and seed propagation."*[16]

INSTITUTIONAL INERTIA

But until the new paradigm achieves its disruptive breakthrough, there is a strong force of inertia, not only among scientists but also in the institutions that deliver policy, transmitting central decrees down to provincial, prefectural, county, township and village levels for implementation. And there are international rangeland scientists who accept China's argument for grazing bans and nomad removals.[17]

However, the momentum is building, as the Peking University team show in their report, which was funded by a Natural Science Foundation of China research grant. They take as the core central policy decree the State Council 2002 announcement of policy settings.[18] Policy implementation has now reached the point where, across all of China's grasslands, "*by 2013, grazing had been excluded from 96 million hectares of rangeland in the main pastoral areas, accounting for about 24% of total rangelands.*" The figure comes from the Ministry of Agriculture's authoritative annual Grassland Monitoring Reports, issued by the official Grassland Monitoring and Supervision Centre.[19]

This team carefully charts the dawning of the new paradigm, by collecting all the scientific research reports on grassland policy implementation, by Chinese scientists, in Chinese, since 1989, plotting the rising rate of perverse outcomes and negative impacts on the supposed beneficiaries: the pastoralists. After collecting all the science, they had 68 Chinese publications, starting in 1989, on the allocation of animals and land to individual households, under

15 Saverio Krätli, and Nikolaus Schareika, Living Off Uncertainty: The Intelligent Animal Production of Dryland Pastoralists, European Journal of Development Research Vol. 22, 5, 2010, 605–622 See also: Saverio Krätli, Valuing variability: New perspectives on climate resilient drylands development; published jointly by International Institute for Environment & Development, and Peking University, 2015 http://pubs.iied.org/10128IIED.html?k=valuing%20variability

16 Dryland Opportunities: A new paradigm, 35

17 David L Michalk, Geoffrey D Millar, Warwick B Badgery and Kim M Broadfoot eds.,Proceedings 22nd International Grassland Congress, 15-19 September 2013: *Revitalising Grasslands To Sustain Our Communities*

18 State Council. 2002. Some opinions of State Council on enhance rangeland conservation and construction [GuoWuYuanGuanYuJiaQiangCaoYuan BaoHu Yu JianShe De RuoGanYiJian]. *In*: Editorial Committee of Chinese Animal Husbandry Year Book, Beijing: Chinese Agricultural Publication.

19 MOA (Ministry of Agriculture).2010, 2011, 2014.China National Grassland Monitoring Report [QuanGuoCaoYuanJianCeBaoGao].<http://www.grassland.gov.cn/Grassland-new/Category_11/Index.aspx>.

RHCP. They had 103 publications reporting fieldwork investigations into the productivist package of compulsory fencing, fodder crop cultivation and winter shelter construction, the RECP. They then turned to the third and most recent phase of grassland policy, the grazing bans and nomad removals, the NSP, for which there were 72 Chinese scientific journal articles until 2012 (and more since). That is a total of 243 research reports, enough to detect the onset of a paradigm shift, which classically gathers momentum as scientific findings increasingly report results that no longer confirm or fit the dominant discourse, instead reporting dissonant, surprising results incongruent with conventional wisdom.

Those 243 research reports are readily searchable, in English or Chinese, identifiable and downloadable to anyone with access to the CNKI database. For those who don't read Chinese, abstracts summarizing each article in English are also available on the CABI database.

In each phase of China's grassland policy, the neoliberal Rangeland Household Contract Policy (RHCP) that began in the 1980s, the productivist Rangeland Ecological Construction Projects (RECPs) started in the 1990s, and the conservationist Nomad Settlement Policy (NSP) of this century, the reported negative impacts keep growing. Initially, Chinese researchers attributed shortcomings to incomplete implementation of policy, but later recognized the flaws and contradictions in policies that aimed at achieving both production intensification, reductions in herd size, sedentarisation without overgrazing, and underlying all these quantifiable goals, an underlying implicit civilising mission.

With the oldest policy, the Rangeland Household Contract Policy that was introduced in the 1980s, the Peking University bibliometric team identified 68 Chinese research reports between 1989 and 2012 that assessed policy implementation, with more emphasis on measuring ecological impacts, herd size and animal husbandry outcomes, with far fewer focussed on pastoralist livelihoods.

They find that: *"There has been an obvious change in the academic perspectives on the impacts of RHCP in the past 23 years. There has been an obvious decrease of positive perspectives from 33% in the first period to 20% in the third period for ecological impacts, from 50% to 16% for animal husbandry, from 100% to 18% for livelihoods, and from 17% to 8% for social aspects; And an obvious increase of negative perspectives from 17% to 60% for ecological impacts, from 50% to 84% for production impacts, from 0% to 82% for livelihood impacts, and from 0% to 69% for social impacts.*

"The papers that reported negative impacts mostly argued that the RHCP was not adapt to the dynamic and heterogeneous characteristics of the rangeland ecosystem. The fencing constrained livestock mobility and led to increased grazing concentration in certain pastures. It also decreased the proportion of large livestock (such as camels, horses and cattle), because these livestock require larger foraging areas than small livestock (such as sheep and goats). As a result, livestock diversity has decreased. In addition, contracting rangeland to individual households rapidly increased production costs because pastoralists faced increased investment in fencing, drilling wells, and purchasing fodder during the years with extreme weather. At the same time, reducing livestock mobility decreased pastoralists' ability to cope with natural disasters by moving to a more favorable location as before and thus increased the risk to livestock production. In terms of the effects on pastoral society, RHCP weakened the community's collective organization, increased conflicts among households, and broke the reciprocal interactions that were a foundational aspect of the traditional pastoral society.

"Regarding the cause of ineffective and negative policy impacts, scholar perspectives have undergone a large shift during the past two decades. From 1989 to 2001, most of the papers (88%) attributed the problems to incomplete policy implementation. However, over time, this proportion decreased, and increasing number of papers instead argued that the policy itself was the cause of the problems, as it failed to consider the social and ecological characteristics of the system."

This synthesis of Chinese grassland science then turns to the next major policy, in the 1990s, the 103 papers that

assess the Rangeland Ecological Construction Projects (RECP), which required pastoralists to fence land allocated to them, and also fence, plough, sow, harvest and store fodder crops for winter feed, build bigger animal shelters and usually permanent winter housing for the family. These policies have a productivist agenda, intending to induce intensification; but they also have a conservationist agenda, to prevent grassland degradation by incentivizing herders to reduce herd size by increasing survival rates, and speed up monetization of animals for meat. The tension between productivism and conservation, and between the expense of fencing, ploughing, house building etc., and maintaining pastoralist incomes, is a theme that emerges from this overview of the 103 research reports by Chinese scientists.

The Peking University team states: *"The construction of infrastructure and development of intensive livestock feeding system inevitably increased production costs, and thus reduced the net benefit to pastoralists. This is why 46% of related papers argued that the RECPs had negative impacts on animal husbandry. In addition, 7% of the papers found that the policy failed to achieve the expected shift in production modes because pastoralists encountered challenges such as lack of financial capital, and lack of skills of pen-raising and cultivating fodders. 60% of the papers reported a decrease in pastoralist livelihoods (at least in short-term) because of the increasing costs and labor requirements for livestock production; and living costs were much higher than when they lived in their former pastoral area. As a result, the poverty increased. The remaining 2% of the papers found that the ECP policy was ineffective.*

"76% of the papers argued that RECPs had obvious negative impacts on pastoral society. The most direct negative impacts were increased conflicts between local governments and pastoralists, since many pastoralists were forced to engage in illegal grazing to reduce their production costs under grazing ban. The obvious reduction in income from pastoralism after initiation of the grazing ban and grazing rest forced many family members to leave pastoral regions to search for alternative forms of employment, leaving the old family members and children uncared for at home and weakening family ties. Furthermore, pastoralists who were resettled under RECPs but could not find proper jobs often became involved in criminal activities and gambling."

Early this century the latest wave of policy was introduced, the Nomad Settlement Policy (NSP), although sedentarisation has been a policy objective for much longer. The review of China's grassland science on this states: *"The academic perspectives related to negative impacts fall into four categories. First, the NSP reduced livestock mobility and concentrated grazing near the settlement, thereby increasing rangeland degradation. Second, after the pastoralists were settled, they had to rely heavily on external supplies of fodder, so the cost of livestock production increased. Third, the gap between rich and poor expanded rapidly. Many poor families survived entirely on government subsidies, as they could not find alternative income sources. This created a variety of social issues, including increased criminal activities and internal village conflicts. Finally, the NSP created serious threats to preservation of the traditional pastoral culture. After the pastoralists being settled, previous social networks were weakened, leading to increased internal conflicts. Many of the young generation lost interest in the traditional pastoralism and rangeland management system."*

One recent author reporting higher levels of poverty, as pastoralists get on the modern treadmill of upscaling, efficiency, intensification and fast throughput of animals for slaughter is Mailisha, writing of the Yugur and Tibetan lands of mid-Gansu province, in Sunan county.[20]

Taken together, the grassroots initiatives to generate new hybrid forms of effective grassland governance, and the increasingly evident failure of successive top-down policies add up to a new paradigm being born. Contrary to the assumptions of many, China is not a monolith, and local initiatives can have widespread effects. What happens on the ground often varies from the dictates of official policy, and is often ahead of the trend of policy. That was so at the end of the 1970s and into the early 1980s across rural China, when it was evident that large-scale communisation had failed, and smallholder peasant farmers took back their land, tools and animals, well ahead of the policy shift that

20 The mechanism of poverty resulting from "ecological migration": From case studies of herders in Minghua District, Sunan Yogor Autonomous County, Gansu Province [In Ecological Migration. Environmental Policy in China. Masayoshi Nakawo, Yuki Konagaya and Shinjilt (eds.), Bern: Peter Lang, 122-136]

gave official approval to what was happening at ground level.[21] Deng Xiaoping's famous "reform and opening up" was, in the countryside, a belated yielding to new ground truths.

REINTRODUCING THE *RUKOR* TENT-CIRCLE ENCAMPMENT

Tibetan pastoralists have long maintained ground truths that bypass official policy. China's swing, on the grasslands, from total communisation, to each individual family contracting separately with the state, never suited the community based mode of successful pastoral land use and livestock production. In between these extremes of communisation and individualism is the Tibetan tradition of grouping the management of land and herds, with decisions taken by the *rukor* tent circle encampment. Not only are many heads wiser than one, this has long been a flexible way of adapting to changing seasons, extreme weather, unpredictable events, unexpected opportunities, and the labour-saving gains available from pooling herds at certain times. The decisions taken within the *rukor* managed herds without any need of fences to delineate territories, or the inspections of Grassland Monitoring teams. The *rukor* could convene meetings as needed to accommodate changing circumstances, not only changes in grass availability but also changes in family size and composition, as children became adults and needed animals and access to pasture as they married and started new families. It was a regular part of the *rukor* process to adjust the assigning of pastures to accommodate the rising or falling size (and fortunes) of families.

While all of this has remained invisible to central policy makers, this customary process of adjusting to changing realities has persisted, where possible. Anthropologists working in nomadic areas report the quiet persistence of informal gatherings that arrange who has access to which portions of pasture. Even after land was formally allocated and land tenure assigned exclusively to individual families, there remains the vast area beyond the fences that is defined as collectively owned. These are usually the summer pastures, often at higher altitude. The Grassland Law leaves property rights to access these upper pastures ill-defined; and official discourse has frequently accused Tibetan pastoralists of wantonly over-grazing these lands that in theory belong to everybody and in practice to nobody. Much of the alarmed rhetoric of degradation and over-grazing has focused on these collective pastures, especially on their use in spring, before grasses have time to grow much, as animals weakened, even starving, after a long winter are desperate for feed.

Clearly there are instances where this concern is warranted, yet the recent research synthesized by the Peking University team suggests the main degradation problem is within the fenced boundaries of the winter grazing areas, which are simply too small for Tibetan pastoralists to maintain a herd size that has always been their only guarantee of survival and security.

Meanwhile the customary cooperative decision-making has persisted, unnoticed by central policy makers. As policy implementation has steadily pressured pastoralists to reduce mobility, invest in houses, fences and fenced fields for growing fodder crops, and imposed herd size limits, the scope for customary community based management has diminished. Once grazing bans are imposed, especially when pastoralist producers are required to sell their animals, surrender their land tenure certificate and even relocate to a far distant block settlement, there is no longer much opportunity for customary governance to look after everyone. Yet even when grazing bans are imposed and families removed to urban fringes, their animals are often rented out to those who still have their land, so the vestiges of tradition persist.

What is new is not that Tibetan pastoralists have continued to cooperate with each other but that these community based processes are now becoming visible to official institutions, through the local experiments in inventing combinations of customary cooperation and markets in tradable grazing rights. It is official policy that pasture user groups should be encouraged. A 2014 *Review of China's Rangeland Management Policies* by the same

21 Kate Xiao Zhou, How the Farmers Changed China: Power of the People. Westview Press, 1996.

Peking University team cited above states: *"The government 'recommends reinforcing support for the development of herders' cooperatives to facilitate a larger scale of grassland management.' In addition, government narratives support re-allocation of rangeland resources not only through rangeland transfer systems, but also through cooperative and collective tenure management."*[22]

Customary encampments reveal themselves as modern and relevant to a state starting to notice its top-down regulatory approach is failing to meet any of its three objectives of intensified production, conservation of grasslands and increased income for the poor. At a time when China has embraced the market economy for its ability to send the right signals, the new *rukor* plus market hybrid announces a process for generating those signals, that incentivize pastoralists to graze optimally, avoid overgrazing, conserve grassland, and increase their incomes, both by renewed mobility and by selling grazing rights.

The new hybrids of custom and neoliberalism have the potential to become a new paradigm that helps the state achieve its productivist and sustainability goals, while helping the pastoralists improve their lot after decades of sliding into poverty. Existing institutions have been unable to achieve these outcomes, and the evidence of perverse outcomes is mounting, notably the degradation of allocated family land that is too small and inflexible to sustain herds and basic food security. The new paradigm is arriving just when it is much needed.

COMMUNITY BASED CLIMATE CHANGE MITIGATION

If this official support can be actualized, with implementation of official goals devolved to them, there is every reason to believe further grazing bans and removals of pastoralists will be unnecessary. Further, such community-based cooperatives contribute to achieving the sustainable delivery of wide range environmental services. They will thus be eligible for payment for environmental services (PES) through market based contracts that connect distant greenhouse gas emitters with remote communities who act to capture carbon by moderate, flexible and intelligent grazing that maintains biodiversity and prevents degradation. They will also be eligible for payment under the emerging global market based REDD+ process. REDD+, an acronym for Reducing Emissions from Deforestation and Forest Degradation, with the + sign indicating carbon capture, which can be done on the grasslands as well as in forests. REDD+ is major initiative gaining momentum worldwide, as a market-based way of ameliorating climate change.[23] Whether this will be beneficial for pastoralists is yet to be seen, but at least in theory it offers the prospect of pastoralists being paid to maintain pastoral mobility, continuing to graze their animals sustainably; which seems a more suitable outcome than compensating pastoralists for leaving the land, selling their animals and surrendering their land tenure documents, as is happening now.

Around the world comparable projects are under way. In Australia, for example, Aboriginal communities are paid considerable sums to burn their savannah country, because it will grow back strongly after the fire, and capture more carbon.[24] Government funding is based on official recognition that a revival of traditional indigenous land management practices, such as firing the savannah grassland and shrubland soon after the end of the monsoon is better for carbon capture, and biodiversity protection, than allowing far more destructive wildfires to occur late in the dry season. Similarly the cultural norms of the Tibetan pastoralists are part and parcel of long term sustainable and

22 YanBo Li, Gongbuzeren and WenJun Li, A Review of China's Rangeland Management Policies, International Institute of Environment and development, June 2014, 11 http://pubs.iied.org/10079IIED The quoted remarks about herder cooperatives are from: Ma, Y.X., 2011. Some suggestion on consummate Grassland Construct System [WanShanCaoYuanChengBaoZhiDu De JiDianYiJian].http://www.grassland.gov.cn/Grassland-new/Item/2837.aspx . Publish date: 2011-3-28

23 Tobias Dan Nielsen, The role of discourses in governing forests to combat climate change, International Environmental Agreements (2014) 14:265–280 Bushley, B. R. 2014. REDD+ policy making in Nepal: toward state-centric, polycentric, or market-oriented governance? Ecology and Society 19(3): 34. Tenure Trends: How is REDD+ Doing? Assessing the vital signs, Rights & Resources Initiative, 2010

24 http://www.mycarbonfarming.com.au/workspace/uploads/projects/olkolaflyer_existingstyle-webf-54bdf65fe0ef4.pdf http://www.cleanenergyregulator.gov.au/Emissions-Reduction-Fund/Want-to-participate-in-the-Emissions-Reduction-Fund/step2/auction-results-april-2015/Pages/Carbon-Abatement-Contracts-table.aspx

productive use of the grasslands. The Peking University team states: *"A growing body of academic literature in China understands pastoralism as a coupled social-ecological system where the livestock production system, the socio-cultural organization, cultural norms and knowledge, and the management system of the rangeland resources have co-evolved with ecological variations."*[25]

This is a more inclusive approach, which requires far less capital investment by pastoralists or by the state, and is not reliant on fossil fuel inputs to grow, harvest and haul fodder to the penned animals.[26] By comparison intensified animal production in feedlot enclaves requires high levels of capital expenditure and heavy reliance on fossil fuels, exemplified by the dairy industry of Inner Mongolia, which is dominated by a few large corporations, beneficiaries of official subsidies and preferential policies.

The way forward still seems, to a developmentalist state, to be step backward. Official China remains committed to modernizing the grasslands; as if it is a self-evident truth that a state that can generate the greatest three decades of wealth accumulation the world has seen must surely be able to do the same in its remote grasslands. The momentum of modernity is forward, the Chinese term for rangeland degradation, *caoyuan tuihua*, means going backwards.[27] How can a China on the brink of realising its great dream of not only wealth but civilization, high human quality, modernity and ecological protection, turn round and acknowledge the pastoralists had it right all along? Surely this requires a shameful retreat by the state, an admission of failure and loss of face? If so, the new paradigm will struggle to disrupt the old embrace of "Mr. Science" and the "objective truth" of rangeland degradation caused by ignorant herders.

But neither the pastoralists nor the scientists critiquing institutional policy failure suggest any such humiliation. The new paradigm offers the state a key ongoing role in leading the rehabilitation of areas where there is degradation, bringing both science and capital to assist community based experiments in seeding degraded areas, which has so far had little success. The decades of under-investment in the rangelands require more than drawing red lines round officially protected areas, then excluding all human activity.

China could become an exemplary model for developing countries around the world, a status it has achieved already in many ways, by adopting the new thinking on pastoralism. In its forests, China's Ministry of Forests is fast granting secure long term land tenure to villagers in and close to the forests, as the most skillful way of ensuring villagers feel the forests are theirs, and are incentivized to care for them. On the grasslands, China's Ministry of Agriculture persists in doing the opposite: stripping pastoralists of land tenure rights. Those rights were granted by the state only 20 to 30 years ago, and came with solemn promises that such tenure is guaranteed over the long term, for the same reason as in the forests: to incentivize pastoralists to treat the land as theirs, and care for it.

25 A Review of China's Rangeland Management Policies, 2014, 5

26 T Wang, Analysis on the Impacts of Pastoralists' Adaptive capacity of Climate Change under Government Interventions: a case study in Hexigtan Banner, Inner Mongolia, Peking University dissertation, 2011

27 Yonten Nyima, From 'Retire Livestock, Restore Rangeland' to the Compensation for Ecological Services: State interventions into rangeland ecosystems and pastoralism in Tibet, PhD dissertation, University of Colorado, 2012, 135, available online via Proquest Dissertation database. Also: http://dissertationreviews.org/archives/3733

Executive Summary

This summary has three sections: a statement of the problematic, conclusions, and recommendations.

PROBLEMATIC:

China's response to its' rangelands abounds in contradictions; leading Chinese scientific researchers on the grasslands to describe the legacy of statist interventions, in successive policies over many decades, as "improper policy."

ONE: PRODUCTION VS PROTECTION

On one hand, China has long expected the rangelands to become more productive, especially as China's wealth accumulates, and more people can afford meat. On the other hand, China has persuaded itself that "ecological environment is fragile" on much of the vast rangelands, making conservation and protection the top priority, chiefly the protection of downriver northern China from erosion upriver, on the degrading rangelands; and protection of Beijing from upwind dust storms originating in Inner Mongolia. Those to be protected are far from the rangelands. This requires pastoralists to cease their traditional livelihoods and migrate to urban fringes. It also requires China to forego food production, and weaken food security, at a time when food security is a global problem.

In official policies and laws governing the rangelands, there are further contradictions, with further unintended consequences. From the beginning of effective control over the rangelands (1940s in Inner Mongolia, 1950s on the Tibetan Plateau) the revolutionary party-state had a singular objective, of greater livestock production. The communes established to achieve this goal collapsed 20 years later, but the Animal Husbandry Bureaus created to promote the productivist agenda persist today, alongside newer bureaucracies implementing the opposing agenda of watershed protection, grazing bans, closing pastures, carbon capture and outmigration of livestock producers.

The tension between production and protection remains unresolved. The Tibetan pastoralists are caught between these competing imperatives, trying to persist with their livestock despite restrictions on land tenure, herd size, family size, compulsory fencing, and policies requiring them to invest scarce money and time to farm fodder crops and build permanent winter homes. The policy objectives behind these regulations are seldom explained, and remain incomprehensible to those on the ground.

What pastoralists experience is that each successive bureaucratic intervention further restricts their ability to make a living, pushes them further into poverty, even, in bad weather or if someone falls ill, into destitution.

Both the productivist and protectionist policies curb pastoralist mobility, which has always been the key strategy for making light use of the grasslands, always moving on before exhausting the grasses. In the name of intensifying production on a fixed plot of land, productivist policies insist on fencing and immobility. In the name of protectionist conservation, grazing is banned on much or all of the lands allocated to each pastoralist family, whose land tenure rights are often abrogated altogether. The result of this deliberate shift, from extensive land use to intensive, is to

concentrate herds,and therefore grass depletion, within the fenced area allocated to each family. That family is then blamed for the inevitable degradation, setting off, in official minds, even more urgently required restrictions on herd size, or grazing bans, or closing the pasture land altogether, with the removal of the pastoralists to a distant proto-town of concrete boxes.

TWO: INSTITUTIONAL CONTRADICTIONS

Then there are the contradictions between national policy and local implementation. At a national level, China enacts laws and official policies meant to apply to all the rangelands that make up half of China's area. In practice, there are many rangelands, with differing problems and prospects. Local governments must implement central policy, but in practice have great latitude as to how this is done, including even a refusal to implement. In some areas, especially where local cadres are not of the same ethnicity as the masses, this has led to cadre rent-seeking, extra taxation of the pastoralists, rigid and even zealous enforcement of quotas irrespective of outcomes and impacts. In other areas, especially when local government and local people are of the same ethnicity, policies are bent to accommodate local interests and circumstances, often in ways never intended by central leaders, and which usually escape notice.

At a nation al level there are many departments and bureaus dedicated to productivism, other to conservation of the same areas. Their agendas clash, and the response has been to add further bureaucratic layers.

Although productivism was the dominant ideology almost until the start of this century, central authorities have invested little in the rangelands, have not succeeded in adding value to the primary surpluses of the pastoral economy (of wool and dairy products) and Tibet remains the only area in China where rural industrialisation (Township & Village Enterprises) failed to occur. There are still few linkages connecting the Tibetan pastoral economy to China's national economy, despite the high urban demand for wool, dairy and meat.

THREE: CONTRADICTIONS OF GOVERNANCE MODELS

A further contradiction is between the top-down, dirigiste command-and-control economy and the embrace of the market as the solution to all problems of production and consumption. Although many would prefer to believe that the old revolutionary model of state planning and central control is long gone, in pastoral regions the state remains strong, highly interventionist, much given to social engineering, and to moving populations about through incentivisation and outright grazing bans. At a time when China has repudiated the redistributive, allocative statist model and affirmed its embrace of neoliberal markets, on the Tibetan Plateau statist capital investment continues to pour into infrastructure, into highways, railways, hydro dams, extraction enclaves, urban hubs and the corridors that connect them.

However, a neoliberal economy is, for the first time, also flourishing in Tibet, especially in central Tibet, as a mass domestic tourism industry rapidly scales up.

Thus there is a contradiction between word and deed. Official policy calls for non-state corporations to play a decisive role, yet in Tibet state-owned enterprises and direct state subsidies dominate the economy, while rural areas, especially the pasturelands remain underinvested, neglected and now depopulated. China's word emphasises the future of these lands as red line protected areas, as a contribution to global climate change adaptation and the safeguarding of precious water sources. In practice, mining proliferates in the ex-pastoral areas where there is no longer a Tibetan population able to defend their lands against semi-legal or illegal resource extraction accompanied by corruption of officials who are supposed to ensure designated protection means actual protection. The mining industry has been a major focus of the current crackdown on corruption.

On the grasslands there is a similar tension between the neoliberal contracting of allocated land to individual pastoralist families; while the remaining pasture land, especially the summer pastures essential to the seasonal production cycle, remain collectively owned by collectives that barely function because of official fears over security and stability, resulting in unclear property rights, and recent revocations of formerly guaranteed long term tenure.

FOUR: CONTRADICTION BETWEEN GRASS AND ANIMALS

Further contradictions may be even more ingrained. The starting point of China's rangeland policy takes the form of a classic Marxist dialectic: there is a contradiction between grass and animals. This proposition is predicated on the simplest of binary logics: the fewer the grazing animals (wild or domestic), the greater the quantum of grass; conversely, the more grazing by animals, the less is the quantum of biomass, at least above ground, where it is visible and measurable, even by satellite. This dualistic logic is of the either/or, zero/sum variety. You can have one, or the other, but you can't have both. You can have grass or animals, and policy makers must choose. Increasingly, China, at the highest level, is choosing to value grass and water as more important than livestock and pastoral livelihoods. But the entire proposition is false. Grazing societies worldwide are based on a balance of grazing animals and grass, a balance usually maintained productively and sustainably through the strategy of mobility.

This is the one contradiction China acknowledges. It is in fact foundational, a presupposition on which all rangeland policy is based. It is indicative of the unfamiliarity in China's metropolitan centres with the basis of any dryland livestock production economy, worldwide, both within and beyond China. It is a misunderstanding at the heart of policy prescriptions, which take arable cropping lands as the norm, and the only truly productive landscapes, and thus seek only to make the drylands suited to extensive, mobile use more like the intensively farmed arable lands.

Over the six or more decades of active control over the rangelands of western and northern China, many strategies for overcoming the contradiction between grass and animals have been attempted, the most straightforward being ploughing the steppes to directly make them bear crops, an experiment that caused disastrous erosion and ongoing dust storms. Other methods included draining wetlands, fencing pasture lands with sod and wire, turning pasture into coal, oil and mineral extraction zones, and most recently, grazing bans and nomad removals under a policy of *tuimu huancao*, which means "closing pastures to grow more grass."

To propose, as a self-evident starting point for policy-making, that "there is a contradiction between grass and animals", is a version of the assertion, often implicit in the science of ecology, that there is a contradiction between man and nature.

FIVE: INNER VS OUTER TIBET

Of the 150 counties officially designated as areas of autonomous Tibetan government, constituting almost the whole of the Tibetan Plateau, only half are in the Tibet Autonomous Region (TAR), yet China regards only TAR as Tibet. The remaining 75 counties are split between four Chinese provinces: Qinghai, which by area is 95 per cent Tibetan; Sichuan, Gansu and Yunnan. China has sometimes defined this split as outer Tibet, signifying TAR, and inner Tibet, which includes the other four provinces.

This carve-up has many consequences for the pastoral landscapes, and how national with policies are implemented. At one extreme is TAR, at the other Qinghai, with the smaller Tibetan populations in Sichuan, Gansu and Yunnan in between. Central leaders, mindful that the world watches Tibet, and concerned that extremes of inequality between rural Tibetans and urban Han Chinese settlers is a security problem, have special policies towards TAR promoting income earning opportunities, comfortable housing for rural Tibetans, subsidies, tax relief and other preferential

policies. At the other extreme is Qinghai, a neglected province which campaigns for central finance by pitching itself as the source of China's great rivers, warranting central interventions to classify most of the Tibetan pasturelands as conservation protection zones to guarantee water supply for downstream China. In Qinghai, the same policies, of poverty alleviation, diversifying income earning opportunities and comfortable housing are implemented, but in a very different way, by excluding pastoralists from their pastures, cancelling their land tenure documents, removing them to distant concrete barracks. There they cannot advance into the modern economy, lacking literacy, spoken Chinese and vocational training, and remain in limbo, dependent on official rations, feeling like panned animals.

In parts of Qinghai, this statist program of prioritising water production over livestock production is offset by the seasonal harvest of *yartsa gumbu*, a fungus arising in certain grasslands in springtime, so prized by Chinese consumers that fortunes can be made, even eclipsing animal rearing which, by comparison, seems like a lot of hard work for little return. In the 42 per cent of Sichuan's area that is up on the Tibetan Plateau, *yartsa* are found in some areas, and in Yunnan's Tibetan uplands *matsutake* mushrooms are found, also a substantial source of income for Tibetan gatherers.

The provinces incorporating "inner Tibet" have major Chinese populations and major cities on or close to the plateau, generating market demand for rural produce, and opportunity for Han Chinese to migrate up into the mountains. Official policies promoting intensified animal production on urban fringes are more vigorously implemented, while displaced nomadic pastoralists excluded by grazing bans from their land are expected to join the hundreds of millions of Han Chinese rural migrants seeking urban factory work. At the time of the 2000 Census, there were 1.867 million non-Tibetan resident on the Tibetan Plateau, and 5.415 million Tibetans. But few non-Tibetans officially live in TAR; nearly all the Han and Hui Muslim Chinese immigrants into designated Tibetan areas are in the nominally Tibetan counties of the four provinces that have parcelled out "inner Tibet." These are areas of multi-ethnic mixing, and national policies to intensify commercial production, including resource extraction and intensive farming, are more advanced.

By contrast, TAR remains a special case, not only because China's leaders are acutely aware of global scrutiny, but also because it is "outer Tibet" in the sense of being furthest from lowland China, remote from major markets, cut off from historic trading connections with South Asia, more dependent on central subsidies, lacking in industrialisation.

Throughout the Tibetan Plateau, and across China, national policies are meant to be implemented, as if they are right for all. The same slogans and campaigns are used, which creates much confusion, because local implementation varies greatly. This has long been so.

The distinction, in Han Chinese metropolitan minds, between inner and outer Tibet, is not meaningful to Tibetans. It is a distinction originating in the provincial boundaries drawn by Republican China nearly a century ago, with deeper origins in the conception of Qinghai as a Chinese buffer separating the Mongols from their deep links with the Tibetans. Revolutionary China inherited the provincial borders, dropped the labels of inner and outer Tibet, and treated the Tibetan populations of the uplands of Qinghai, Sichuan, Gansu and Yunnan as just one among many nationalities of each province, with less and less entitlement to special status, despite the 1950s designation of 75 Tibetan Autonomous Counties in those four provinces. Today, when Tibetans refer to all 150 Tibetan counties of the Tibetan Plateau as Tibet, China officially reacts with outrage, as if this is a newly minted grandiose invention, of a claim to a "Greater Tibet" that is utterly impermissible.

Although the labels of "inner" and "outer" did not survive the demise of Republican China, the different ways Chinese policy has been implemented in "inner" and "outer" has led, for Tibetans, to abiding mistrust towards China's intentions. In the 1950s, Mao decided to delay, in "outer" Tibet, implementation of revolutionary class warfare against the landlord and lama class, because he saw that in central Tibet there was not the prerequisite hatred and bitterness towards the oppressors. But in eastern Tibet, in Sichuan, class warfare (known as "democratic reform") went ahead, likewise the communisation of pastoral lands and herds, both of which alienated Tibetans of all classes against China, not against the lamas, who were (and are) revered in eastern Tibet, or Kham.

China's policy of allying itself with the ruling "feudal" elite in TAR, while demanding Kham Tibetans denounce and attack their landlords and lamas, led to accusations of hypocrisy, and an attempt to conceal true intentions. When the Tibetans of central or "outer" Tibet protested, China cracked down and in 1959 began rapid, forcible implementation of communes, and "democratic reform."

In more recent years national slogans and campaigns deemed applicable to all Tibetan areas have included comfortable housing, well-off society, harmonious society, development as the solution to all problems, opening up the great west, converting farmland to forest, ecological migration, closing pasture to grow grassland, new socialist countryside, among others. China is also committed to improving "ecological environment", not only by directly reducing pollutions from heavy industries and cities, but also by offsetting pollution by establishing protected areas elsewhere that capture carbon, thus allowing polluters to persist, as long as they pay modest amounts to those distant folk who provide the compensating environmental services.

On the Tibetan Plateau these official slogans and policies are implemented in quite different ways, and often in more benign ways in central, or "outer" Tibet, and in more disempowering ways in "inner" Tibet.

SIX: NOMAD DANGER VS GRASSLAND PLEASURE

There are further contradictions. China sees the rangelands as the ancient source of its enemies on horseback, sweeping in off the prairies to plunder villages and even overthrow emperors, as happened in 1271 and 1644, resulting in 360 years under the rule of nomadic tribes. Chinese imagery of the rangelands has been almost entirely negative: remote, poor, backward, primitive, feudal, cold, harsh, stagnant, source of plague, air so thin each breath may be one's last.

Yet today a domestic Chinese tourism boom depicts these same areas as highly desirable, mysterious, exotic and even holy. Even snarling Tibetan mastiff dogs are called holy.[28] One can stroll into any bookshop, where, for less than four dollars, one can buy a glossy magazine of 400 pages devoted entirely to the sumptuously colourful landscapes, architecture, ordinary people and charismatic lamas of Tibet. In the entire magazine, the only other content is the ads; full-colour double page spreads for the latest models of Mercedes, BMW, Jeep, and Cadillac etc. Audi and Landrover each has an eight-page spread. Yaks drinking at a lakeshore adorn the cover.[29] Every romantic trope of Tibet as a magical Shangri-La, images originating in the projections of the European gaze, is lavishly reproduced in this Chinese language publication for Chinese consumers. China is now deeply ambivalent.

MAKING SENSE OF CONTRADICTIONS

Are these contradictions a result of a deep ambivalence towards the rangelands? Are they the result of an ingrained ignorance of grassland dynamics, the logic of life –human, animal and grass- that generates perverse outcomes? Is there a deliberate policy of sedentarising the nomads, and populating the pastoral lands instead with politically reliable tourism staff and miners? Does China have a long term strategy for its rangelands, the biggest grassland in the world? These are the questions this report seeks to answer.

To some, answers are easy to come by. To exile Tibetans and their supporters, it is self-evident that China is out to destroy the nomadic way of life, sedentarise all pastoralists throughout the Tibetan Plateau. This is just part of a wider agenda of cultural genocide. The only surprise is that it is taking China so long to depopulate the Tibetan countryside, and let in the miners.

28 China's Tibetan Mastiff, Foreign Languages Press, Beijing, 2006
29 Chinese National Geography #10, 2014 ISSN 1009-6377 http://hk.dili360.com/

The opposite certainty is equally tidy and coherent. China's pastoral minorities, the Mongol, Tibetan, Kazak and other pastoralists have for decades irrationally increased herd sizes, while resisting modern market-driven meat production commodity chain efficiencies that include accelerated slaughter rates, feedlotting, ranching and intensifying production close to urban markets. By stubbornly clinging to their traditional mode of production, these herders are the primary cause of the degradation that is ruining the rangelands. Mandatory restrictions on grazing are now an objective scientific necessity, if the degrading rangelands are ever to return to equilibrium.

These two narratives dominate the debate. Both are easy to comprehend, are internally consistent, coherent and logical.

This report argues, in detail, that both of these master narratives are wrong, in that they grossly oversimplify the circumstances facing pastoralists and policy makers alike. Both misread the ground situation, and edit out of frame much that is relevant.

The conclusion of this report is that what is happening on the rangelands, especially those of the Tibetan Plateau, is not just some midpoint between these competing, and mutually exclusive, master narratives. This is quite different to the dominant discourses.

To understand this tragedy of the semi-privatised common lands, we need to look elsewhere, to what has been edited out of the narrow certainties that seek to do little more than find who is to blame. Blaming China for a long term strategy of ridding itself of its nomads has the neatness of all conspiracy theories, but it ignores the twists, turns and contradictions of China's rangeland policies and practices over the past 55 years, and the major differences between differing areas today. Blaming the nomads for being greedy, ignorant and destructive of their own lands and livelihoods, of fouling their own nests, is improbable and leads only to herding the herders off their ancestral lands.

Rather than apportioning blame, as the primary purpose of analysis, this report looks closely at what is missing from the master narratives, especially the assumptions, tacit and explicit, that all parties bring to their understanding of what is to be done.

In order to this, we must look at rangeland dynamics, ecological equilibrium theory, fresh data from botanists, zoologists, veterinarians, agronomists, prataculturists, economists, historians and many more. We must listen to anthropologists and above all, the voices of the Tibetan pastoralists. We must explore national imaginaries, the boundaries of what is tacitly understood to be possible, admissible, imaginable, and what is not. A new generation of young Tibetan postgraduates are now doing fieldwork in pastoral areas, and in their dissertations telling us what we have not clearly heard before –the needs, concerns, risks and opportunities of the pastoralists themselves, as they negotiate ways to maintain pastoral lifeways, pastoral production and customary pastoralist ways of conserving biodiversity.

CONCLUSIONS:

What emerges from immersion in all these sources and disciplines is a core insight: China has never understood the mode of production, economy or lifeways of its pastoralists. China has always been focused on its arable lands and not on its historically much more recent acquisition of much larger areas of pastoral land. Arable cropping land remains the model and benchmark, against which the drylands better suited to extensive land use will always appear to be unproductive.

Rather than evolving a comprehensive policy embracing all production landscapes, China continues to push the vast rangelands to become more like croplands. Many rangeland policies have this intention, and the transition from extensive to intensive production is the explicit goal, sidestepping the fundamental question of whether these drylands can in fact sustainably support intensive land use.

Policy making in China, while persisting with the productivist Animal Husbandry Bureaus, is fast swinging towards drawing red lines of permanent protection around the pasture lands, especially in the areas where the great rivers of China and SE Asia rise, in Tibet: the Yellow, Yangtze and Mekong rivers. Having begun with a simplistic dialectic, in which grass and animals contradict each other, China is now embracing a vision of pristine, unspoiled, ungrazed grassland wilderness as the objective of policy, a correlate of the romantic vision of the pristine, unpeopled rainforest. Yet the rangelands evolved with the grazing pressure of wild ungulates –in Tibet, wild yaks, antelopes and gazelles- and over the past 9000 years of pastoralist land use, with the grazing of domestic herds mingled with the wild, across an unfenced land.

Today, the wild herds remain greatly reduced, though recovering, after decades of indiscriminate slaughter by immigrants and poachers entering the Tibetan Plateau. Insofar as grazing pressure continues, it comes from domestic herds, more than the wild, whose annual migrations to breed are much hampered by the proliferation of fencing. China's adoption of pristine grassland wilderness as the objective of policy, is a profound misunderstanding of the evolutionary balance between animals and grass.

Until quite recently, the two mutually incompatible master narratives were the only available ways of understanding the fate of the rangelands of China, and the millions of pastoralists. Now, as this report carefully documents, both discourses are increasingly questioned, above all by scientists and social scientists whose fieldwork contradicts questionable concepts such as objective carrying capacity and stocking rates. They also question the fundamentals of ecology as a science, with its assumption that any enduring ecosystem must, by definition, be in equilibrium. If there is equilibrium out there, definable through as much measurement as possible, then it should also be possible to return a degraded area to equilibrium through policy interventions. If, however, one of the basic differences between drylands and agricultural lands is that in arable districts the elusive goal of a definable equilibrium is worth exploring, but on the rangelands, where people make their living off uncertainty, equilibrium is a notion with no corresponding reality.

In these ways, this report makes common cause with pastoralists around the world, whose dryland production strategies have been frequently misunderstood, by distant national planners, development banks and overseas development agencies. The metropolitan gaze assumes the mobile pastoralist is unproductive and probably destructive as well, to be blamed for desertification and degradation. The new drylands pastoral paradigm restores mobility as the central strategy of pastoralist success as custodians of both sustainability and productivity. The new paradigm has arrived in China, and is reframing the debate.

Recommendations

This report makes several recommendations for the future, in the hope that pastoral livelihoods are compatible with production landscapes that are also ecologically sustainable.

1. The primary recommendation is that China listen to its pastoralists, and discern their customary strategies for living off uncertainty, in an extreme climate, where 9000 years of human use persisted sustainably until very recently. It is remarkable how seldom cadres and officials have ever sat in the same room as pastoralists, and listened to each other.

2. This report recommends China adopt a holistic policy for all production landscapes, be they agricultural or pastoral, or both. Policy for drylands should take as its starting point that where degradation has occurred, pastoralists are part of the solution, whose active efforts in rehabilitation are best encouraged by payment for present environmental services, and future enhanced services deliverable when bare areas have been re-sown and native grasses again grow. This requires establishing pasture user groups (PUGs) empowered to find local solutions, aided by scientists, extension offices, and a social wage paid by central leaders to finance rehabilitation in a time of lost production and income.

3. The pasture user groups should be assisted, by training and access to micro-finance, to gain access to markets for their speciality produce, to utilise their comparative advantage to add value, especially to wool and dairy products, all in demand in urban China. In these ways China fulfils its promise of creating a well-off society, raising incomes and reducing the urban-rural inequality gap, which China sees as a security threat. The "herder cooperatives" which official policy promotes in theory but seldom in practice should be empowered to restore customary modes of production, and of decision-making, based on the traditional tent-circle encampment, because it is the right size to make effective decisions, and to pool not only accumulated wisdom but also assign pastures and herds in ways that are skilful, labour saving, and conducive to long term productivity. Herder cooperatives should be based on the concept of livestock keepers' rights.

4. A key recommendation is the restoration of mobility, enabling pastoralists to access both summer as well as winter pastures, to relive grazing pressure. Chinese scientists researching policy implementation on the grasslands identify frequent state failure. The time has come for a new paradigm, similar to the UNDP drylands pastoralism paradigm announced in 2009.

5. A longer term aim is to take a fresh look at the strategy of abandoning extensive productive in favour of intensive production in enclaves which cannot handle the pressure of concentrated grazing and hard hooves. Intensive, feedlot based ranching close to cities may in the short term raise meat production. Yet it will employ few people, do little to raise incomes, especially among those deemed surplus to production requirements, and put further pressure on lands ill-suited to intensive use. Feedlotting to fatten animals for slaughter relies on fossil fuels to import fodder from afar, even overseas, notably soybeans from the US. It requires major capital investment in commodity chains, and that pastoralists become farmers growing fodder crops fenced off from their herds. This blending of agriculture and pastoralism, into an agropastoral mix, may work in some drylands, but not on the Tibetan Plateau, which is too cold to generate the agricultural byproducts that elsewhere can be used as fodder.

6. A further recommendation is that pastoralists be given encouragement, not penalties, to reduce herd size. This is best achieved through improved veterinary care, improved breeding and by adopting livestock indexed insurance, which pays pastoralists to restock after extreme weather disasters that reduce herd size. By giving greater security and positive incentives to pastoralists, the state and the pasture users become partners instead of antagonists, in maintaining production landscapes that are both productive and sustainable.

Nomad resettlement houses near Pema, Golok, Amdo, 2012

Chapter One: Civilisation And Sedentarisation

Sedentarising the pastoralists, who have long been the majority of the Tibetan population, can be understood as having a benevolent motivation, an initiative of a party-state seeking redistributively to include the lumpen category of "herders" in China's rising wealth accumulation. How better than to provide them with houses? How better to give them a stake in China's rise, a permanent base as a first step in learning to be modern, both as intensive producers, and as consumers?

The benevolent state sees Sedentarised "herders" as stakeholders in the sovereign state of China. Loyalty to the party-state can be expected of them, in return for the benevolence

Official media emphasise this benevolence, as if there is no other imaginable way central leaders could win the trust and support of the rural Tibetan masses. It does not occur to the state to do what is done almost anywhere in the developing world, providing remote producers with access to markets for their rural specialties, providing them with the training, technology and finance to add value to those products that result from the comparative advantage of those distant pastures. China has not been able add value to the economy of the "herders", partly because it imagines the "herders" as unskilled wanderers for hire, not as entrepreneurial land and livestock managers maintaining, on a daily basis, a balance between productivity and sustainability.

HOW MANY NOMADS HAVE BEEN SEDENTARISED?

China is proud of how many pastoralists, in all provinces where pastoralism is practiced, have been persuaded to settle, and keeps detailed statistics on both the total number of households practicing pastoralism, and how many are settled, as well as what their income is, and how much of that income comes from pastoralism. The most detailed and authoritative statistics are to be found in the *Animal Husbandry Yearbook* published by the Ministry of Agriculture.[30] The latest available edition is for 2013.

Numbers are given for four of the five provinces where the Tibetans live, omitting only the small pastoral population of Yunnan. Separate tables are published for fully pastoral areas and for semi-pastoral, or agro-pastoral areas (*samadrog* in Tibetan) where there is both animal production on the rangeland, and cropping. In the four tabulated provinces of Sichuan, Tibet Autonomous Region, Gansu and Qinghai there were 1,062,436 households classified as wholly or partly pastoral in 2012; of which 897,424 households were classified as sedentarised.[31] The percentage sedentarised in Sichuan in 2012 was 87.1%, in TAR 37.5%, in Gansu 79.6% and in Qinghai 86.9%. These statistics, for Sichuan, Gansu and Qinghai would include semi pastoral households of ethnicities other than Tibetan. These are the best figures publicly available.

They announce a very high degree of sedentarisation, settlement in permanent housing, except for central Tibet

30 Livestock Yearbook China, 2013; China Agricultural Press; Editors Kong Liang, Song Yi; (Zhōngguóxùmùyèniánjiàn, 2013; zhōngguónóngyèchūbǎnshè)中国畜牧业年鉴, 2013; 中国农业出版社 , 孔亮,宋毅主编 ISSN：1009-7996 Available online from CNKI, to subscribers

31 China Livestock Yearbook, 2013; 182-185

(TAR), where policy implementation usually proceeds more cautiously, due to remoteness and international scrutiny. Sedentarisation is not the same as removal of pastoralists from their land. These are figures for the construction and use of permanent dwellings by pastoralist households, which may be on their allocated pasture land, or quite far away, even hundreds of kms.

IS RESETTLEMENT OF NOMADS COERCIVE OR VOLUNTARY?

The accelerating depopulation of rural Tibet has been reported before, notably by Human Rights Watch, as long ago as 2007.[32] Readers not already familiar with a decade and more of nomad removals should read these reports. Despite several subsequent reports, conferences and articles, there is no consensus as to whether this population movement is, as some say, entirely voluntary, or, as several assert, entirely coercive.[33]

The debate has focused narrowly on whether the nomads who move to urban fringes have provided their FPIC: free prior and informed consent, which raises much debate as to whether the incentives, inducements and imposed quotas for leaving customary pastures are temporary or permanent, whether the displaced nomads know in advance that they will seldom be legally permitted to return to livestock raising on customary lands, or whether their land tenure documents will be cancelled. Inevitably, national policy is implemented differently in the counties where the new policy of "closing pasture to grow grass" is actively implemented, so it is hard to achieve a comprehensive overview.

However, the narrow focus on FPIC neglects systemic issues common throughout China wherever rural land can become reclassified as a locus of development and modernity, whether as urban or industrial land, an enclave of resource extraction, or an area earning income for whoever controls it, by entering the global carbon trading market. Sargeson argues that the violence accompanying the frequent conversion of rural land to modern uses is systemic: *"Violence authorizes development, because the rural spaces surrounding cities and towns are characterized as institutionally insecure, disorderly, economically under-productive and incompatible with modernity. It comprises development, because it involves the forced urban improvement of the nation, rural property, governance, people and livelihoods. Violence as development involves many different actors,purposefully engaged in a wide array of brutal, administrative, pedagogic and practical urbanizing tasks."*[34]

This provides a wider perspective. The question is no longer FPIC, but a state discourse that valorises social engineering, the displacement of rural populations declared surplus to the requirements of modernity, whose "wasted

32 TCHRD Annual Report 2014, http://www.scribd.com/doc/254994376/2014-Annual-Report-Human-Rights-Situation-in-Tibet# "They Say We Should Be Grateful": Mass Rehousing and Relocation Programs in Tibetan Areas of China, Human Rights Watch, June 27, 2013, http://www.hrw.org/reports/2013/06/27/they-say-we-should-be-grateful-0 "No One Has the Liberty to Refuse": Tibetan Herders Forcibly Relocated in Gansu, Qinghai, Sichuan, and the Tibet Autonomous Region, Human Rights Watch, June 11, 2007; http://www.hrw.org/reports/2007/06/10/no-one-has-liberty-refuse-0

33 YanBo Li, Gongbu Zeren, and Wenjun Li, 2014, A review of China's rangeland management policies. IIED Country Report. IIED, London 2014.http://pubs.iied.org/10079IIED
Dee Mack Williams, Grassland Enclosures: Catalyst of Land Degradation in Inner Mongolia; Human Organization, Vol. 55, No. 3, 1996
Lili Xun; Zhiming Bao , Government, market and households in the ecological relocation process: a sociological analysis of ecological relocation in S banner; Social Sciences in China, 29:1,2008, 113 — 128 Kenneth Bauer and Yonten Nyima, Laws and Regulations Impacting the Enclosure Movement on the Tibetan Plateau of China, Himalaya, 2011 Li Na and Chen Ke-long, Research on the Population Capacity of the Restricted Development Area in Qinghai province, 中国人口·资源与环境2011 年第21 卷第3 期专刊、China Population、Resources and Environment Vol. 21 No. 3, 2011 MAILISHA, Ethnic Minority Immigrants Under the Western Region Development: A Report from the SunanYugur Autonomous County, Inner Asia, 6, 2004, 111-117 Fachun Du, Ecological Resettlement Of Tibetan Herders In The Sanjiangyuan: A Case Study In Madoi County Of Qinghai, Nomadic Peoples, 16, # 1, 2012: 116–133 Yundannima (Yonten Nyima), From "Retire Livestock, Restore Rangeland" To The Compensation For Ecological Services: State Interventions Into Rangeland Ecosystems And Pastoralism In Tibet, PhD dissertation, University of Colorado 2012 Jin Li, Land Tenure Change And Sustainable Management Of Alpine Grasslands On The Tibetan Plateau: A Case From Hongyuan County, Sichuan Province, China; Nomadic Peoples 2012, 16, #1, 2012: 36–49 Gongbo Tashi and Marc Foggin, Resettlement as Development and Progress? Eight Years On: Review Of Emerging Social And Development Impacts Of An 'Ecological Resettlement' Project In Tibet Autonomous Region, China; Nomadic Peoples 2012, 16, #1, 2012: 134-151 Michael L. Zukosky, Making Pastoral Settlement Visible In China, Nomadic Peoples, 11, 2, 2007: 107–133 Tashi Nyima, In the name of conservation and harmonious development: The separation of pastoralists from pastures in Tibet, in Trine Brox and Ildiko Beller-Hann eds. On the Fringes of Harmonious Society: Tibetans and Uygurs in Socialist China, Nias Press, 2014, 127-158 Hermann Kreuzmann, Pastoral Practices in High Asia, Springer, 2012

34 Sally Sargeson (2013) Violence as development: land expropriation and China's urbanization, The Journal of Peasant Studies, 40:6, 1063-1085

lives" to use Zygmunt Bauman's term,[35] are incidental collateral damage in the onrush of modernity, best displaced into unending mobility that results in their arrival at the gates of the factories and mines that displaced them, as the latest wave of low-paid workers, of low human quality, ready to staff the assembly lines of the world's factory and commodity chains.

It is no accident that the legal status of rural Tibetan land, and the land tenure rights of the pastoralists, are institutionally insecure, granted and withdrawn by the state, at its discretion, because the conventional view among planners has long been that the pastoralists are "disorderly, economically under-productive and incompatible with modernity."

THE MISSING ELEMENT IN THE NARRATIVE

China today makes full use of the menu of policy implementation tools in use worldwide by governments determined to remake landscapes and peoples into mono-functional zones and scrutinised populations. The deliberate ambiguity of legal rights, the seductive attractions of modernity, the concentration of health care, education, electricity and comfort in urban enclaves, the mix of incentives and disincentives, carrots and sticks all add up to a set of drivers conducive to a collapse of the pastoral economy and lifeway.

But the greatest driver is poverty. This report argues that China's grassland policies in recent decades have had the perverse, unintended outcome of making Tibetan pastoralists poorer, with fewer animals, on degrading land, with major mandatory expenses for fencing, fodder crop production and permanent housing. Programs intended to increase productivity in practice had the unintentional result of intensifying poverty, leaving pastoralists with few choices, at a time when the state offers a new future, away from the ancestral pastures.

Poverty as a driver of pastoralist choice to migrate to the urban fringes has not figured much in the debate so far. Poverty explains much, and reframes the unending confusion over voluntary "ecological migration" versus involuntary force and coercion. Poverty in many ways makes the distinction between choice and coercion meaningless, because poor people often have to act for short term survival, rather than in their long term interests. Anthropologists working in nomad areas tell us that those who do move first to the urban fringe, in response to the transmigration quotas cadres bring to nomad communities, are the poor, especially those with very few animals, and those with chronic illness in the family.

A SCRUTABLE SEDENTARISED POPULATION

Thus does China turn a people into a population. The distinction is crucial. Both are collectivities, but a people is a self-constituted collectivity, a nation, a chosen identity, with collective rights. A population is constituted from outside, by the scrutiny of the state, in order that each individual in a population is visible, legible and scrutable. This starts with having a fixed address, a locus. Sedentarisation is intrinsic to enumerating and governing a population.

It is only in the twenty-first century that China has moved to decisively end all nomadic mobility in much of Tibet. While mobility has remained negative to the central gaze, at the same time China as the world's factory has also come to depend on a different kind of mobility, often called mobilisation by development specialists. This is the mobility of the peasantry, seeking factory work in the cities, but willing to return home when a global financial crisis cuts employment, or when the seasonal harvest back home requires all hands, or when they are unwelcome in cities which refuse them and their children residential registration, schooling or health care. To economists, this mobilisation of surplus labour is the fundamental cause of China's rise, and the mobilisation of labour in turn leads to the mobilisation

35 Zygmunt Bauman, Wasted Lives: Modernity and its outcasts, Polity, 2004

of land. Small, uneconomic peasant plots need to be consolidated into bigger farms using capital, fuels, and technology to replace human labour, and become much more productive, according to conventional development economics. Multiple small farms can become a few big mechanised farms only when land is mobilised, becomes a marketable commodity, with small farmers able and willing to sell their land leases and use the proceeds to launch themselves into business or a new urban life. The bigger the farms, the more capital-intensive they become, and better able to attract loans and investment, thus mobilising capital as well. Modernity and efficiency, and globalisation, all involve the mobilisation of labour, then land and capital, so all may flow to where they are most productive and generate the highest rates of return. This is basic market economics.

In China, however, the mobilisation of labour is in both directions, not only from farm to factory, but back again. China has only partly dismantled a Maoist instrument of control, the hukou registration system, which designates each individual as either rural or urban, with no official permission to reside in the long term outside of one's designated area. Despite the repeated calls of the World Bank and other orthodox economists of maximal efficiency, China has clung to this tool of governance, which was originally designed to prevent mass migration to cities. Even though the factories rely on the labour of the healthiest young adults from the countryside, China's cities continue to view them ambivalently, as temporary guest workers, not as fellow citizens with equal claim to social security, education and official services. This ambiguous status helps keep wages down. Workers know they can be sacked and readily replaced by other new arrivals, and if they find it hard to find new employment, their presence in the city is at best semi-legal, with much scope for harassment by police, and pressure to return. Gradually this is changing, as the number of ex-peasants is in the hundreds of millions, as they gradually create pressure for access to schools and services, and equal rights. But there is still a gap, and an official stance that peasants are always peasants and must return if no longer needed. This is mobilisation with Chinese characteristics.

MOBILISING LAND, MOBILISING CAPITAL, MOBILISING PEOPLE

The willingness to leave one's land and work in a factory is extolled as the heart of modernity, showing an adventurous spirit, a willingness to leave behind tradition and join the flows of fluid factors of production, a personal mobility that tracks, follows and goes to where the best opportunities are located. This is good mobility. It begins with the personal choice to seek one's fortune in a factory, but leads to changing the whole of society. It is the mobility of the individual to leave the family and it enables the market's invisible hand, and the state's visible hand, to mobilise land as well. Then all factors of production are in play, fully mobilised, ready to flow to wherever rationality and efficiency can maximise their growth.

Mobilisation is what states do to ready their armed forces for war; it is a military metaphor that economists took up to express the struggle to create wealth. Mobilisation is directed by central authority, be it the invisible hand of market logic or central authorities deciding who and where should get rich first, including themselves. Modern labour mobility is patriotic, contributing to China's growth, leading to mobilisation. Nomadic mobility by contrast is backward, uncivilised, a slavery to nature, an evasion of the state's gaze, a refusal to contribute to the monetised economy and growth.

Modern mobility must be freely chosen by the modern individual rationally calculating where to move to maximise life chances. Revolutionary China had three decades of compulsory mobilisation of land, labour and capital, all in the service of the revolutionary party-state, all in the service of, and at the disposal of the party-state. Between 1949 and 1978 China mobilised everyone, by decree, to go wherever pioneering labour was needed to conquer nature, open the wilderness to the plough, build invulnerable defences deep inland in preparation for foreign invasion, even to magically produce steel in backyard furnaces. Mandatory mass mobilisation failed; the new mobilisation for wealth creation must build the party-state by beginning in individual will.

MOBILITY AS PRIMITIVITE SLAVERY TO NATURE

The voluntary mobility of the nomad cannot, in this urban Sino centric viewpoint, be rational, productive or a good business decision by an entrepreneur of animal production. Everyone Chinese knows the nomads merely blindly follow the animals to their pastures, a bestial existence among beasts. What could be more primitive than wandering wherever one is led by animals?

If civilisation and barbarism are polar opposites, they must begin somewhere, especially if at some point in the ancient past civilisation grew out of barbarism. What was that first impulse towards civilised mastery of the natural world? In the writings of Chinese elites, that crucial turn comes down to a simple choice: the barbarian goes with the animals to the food; the civilised man brings the food to the animals. The civilised man pens his animals in a fenced enclosure, goes out and cuts forage, or grows a fodder crop, then brings it to his animals to fatten them while under his protection. It matters little that the civilised method is more laborious and these days reliant on fossil fuels as well. It cannot be that the nomad with her herd has a more relaxed life, or more leisure, or time to train the mind, because the nomad is a slave to nature, at the mercy of the elements, an insignificant figure in the vastness of the endless plateau.

In China's annual statistical yearbooks, the nomads hardly appear, and certainly not as risk-calculating entrepreneurs running their own businesses. The provincial and county level statistical yearbooks covering the Tibetan Plateau add up to thousands of pages, updated each year. If one searches for the nomads, and the nomadic livestock production economy, there are statistics on tonnages of meat and wool produced, and on how much meat is consumed in the immigrant cities of Tibet, and in the rural areas (a lot less than in the cities). But the producers appear in only one table. In the Agriculture chapter, a table headed *Basic Conditions of Rural Grass-Roots Units and Labourers* lists the total rural workforce, lumping farmers and nomads together.

As a category, known only as "rural labourers", they suggest a rural lumpen proletariat, who could be available wherever there is work; rather than entrepreneurs whose advantage is their intimate knowledge of specific pastures, and the risks of too many or too few animals. Not much seems to have changed since, in 1935, Owen Lattimore wrote on the wickedness of being nomads: "*All policies towards the Mongols, whether Chinese, Soviet or Japanese, appear to start from a common premise: that something must be done about the nomadism of the Mongols. If, in other words, the Mongols can only be cured of being Mongols, all will be well—at least, for China, the Soviet Union or Japan. What, actually, is nomadism, Mongol nomadism? To begin with, there has for centuries been no true nomadism in Mongolia.*

"The Mongols live under a form of society which was established as a compromise between the political requirements of the Manchu empire, and the social and economic traditions of the Mongols themselves. Each Mongol tribal group occupies a territory with well-defined frontiers. Within this territory, all of the land belongs to all of the tribe. People move about freely, because in an arid climate it is not practical to keep animals grazing always on the same fields. Most families in Inner Mongolia have one summer camping-place, to which they return year after year, and one winter place, which is even more permanent, because it is convenient to accumulate a store of fuel for the winter. These two camps are often only a few miles apart. No individual holds any property in land. There being no 'capitalist' monopoly of land, wealth and social advancement depend primarily on the energy and competence of the individual. If he manages his livestock with skill, the natural increase of every year is a clear increase in wealth; he does not have to lay out capital for the purchase of pasture land on which to feed his herds. Nor can the rich man, by asserting private ownership of land, prevent the poor man from grazing his flocks on it. Under such conditions a prince can be poor and ignorant (and often is) and a commoner can be rich and educated."[36]

The mobility of the nomads of Tibet is likewise not random, or arbitrary, in fact many Tibetans are troubled by the romantic baggage the term "nomad" carries in English, with its connotations of utter freedom, fluidity, irresponsibility, the rolling stone with no direction known. Like the Mongols, most Tibetan pastoralists are hardly nomadic in this

36 Owen Lattimore, 'On the Wickedness of Being Nomads', *T'ien Hsia Monthly* 1, no.1, August 1935

modernist fantasy sense of wandering at will. Even before the sedentarisation policies of the modernising party-state they overwintered in one place, often a house, usually big enough for the family on a floor above the animals sheltering at ground level. The one major move to the summer pastures was to known and agreed pastures, usually at a higher altitude, which turn green in spring and summer, and must be vacated in autumn, before the grasses brown and become dormant, preserving biomass below ground for the next growing season. This annual migration up to the alpine meadows and down again, is not what most westerners imagine.

It is not a romantic dualism of opposites to recall the fundamental differences between mobility and mobilisation. Mobility decentralises; mobilisation centralises. Mobility is centrifugal and only occasionally centric, usually in festive high summer temporary encampment, or in midwinter clustering of families in their mud walled overwintering home. Mobilisation is centripetal, drawing into the centre of power all those to be disciplined to serve as agents of the state, in making war, or class war as activists of the Party. Mobilisation is a gathering of resources, especially human resources deemed as such by the gaze of the state, drawing unto itself the able bodied, to be trained and sent into battle. Mobility evades the state, slides past the gaze of the state and out of sight, disappearing up a winding valley, beyond scrutiny.

Unfashionable mobility is the literally upwards mobility of the nomad, beyond the reach of the state; and it is this escape to the highlands that is also celebrated romantically by the revolutionary and anarchist strands of modernity, which romance freedom from social constraint as the highest of values. The word “nomad” serves marketers of mass produced manufactures of all sorts, as a marker of individuality, appealing to imagery of being a carefree, footloose, self-actualising individual who is not just one of the herd. Innumerable manufactures use the term “nomad” to flatter the buyer into conceiving of their purchase as proof of being a free spirit, a different drummer, anything but a creature of habit and predictability. The very qualities that states view with suspicion are transvalued by those who see themselves as “rebels” by disposition.

This dualistic interplay of extremes serves actual pastoral nomads ill. Both extremes assume the nomads wander at random, is findable anywhere and nowhere. The nomad is a random particle, a shape shifter whose presence or absence eludes the objective scientific gaze of the state, like a particle in quantum physics whose ontological status depends on the viewer. It is the mobility of the nomad that is the defining characteristic, whether this is seen as negative or positive. Because the nomad is mobile and eludes the state, he is also without hierarchies, leaders or aristocracies; whether this is seen as further proof of nomadic unaccountability or as romantically attractive. Those who see nomads as primitive, their mobility a slavery to nature; and those who celebrate it as the headless state of not being governed, would be surprised to find nomads industrious, disciplined, careful risk managers who think ahead, calculate their value adding and plan accordingly. Living at the mercy of nature and in harmony with nature are two sides of one coin, neither of which is open to the abundant evidence that nomadic societies are commonly hierarchical, as David Sneath has shown at length. Both extremes assume society is the other to the state, for good or ill. Thus nomads themselves do not have their own states, hierarchies and power relations; they are undifferentiated tribes or hordes, all based on kin connections. Sneath’s evidence of social strata, rulers and ruled in nomadic societies suggests modernity has seen in nomads only what it is predisposed to see.[37]

Mobility has become more fashionable than ever, in academic circles, wheremobilities are studied as a key conduit for understanding the connections,assemblages, and practices that both frame and generate contemporary everyday life. Thus the yearnings of Chinese peasants for New York are seen as constituting 21st century modernity. An academic study of these magical yearnings for a transformed life announces itself as “an exploration of how mobility as a key trope in projects of capitalist development and modernity is currently lived in post-Mao China among a rural-coastal population situated on the mercurial edge between global flows and parochial closures.” (Julie Chu, Cosmologies of Credit, 2011, 4) Global capitalism requires mobility of us all, not only the physical mobility of the

37 David Sneath, The Headless State: Aristocratic orders, kinship society and misrepresentations of nomadic inner Asia, Columbia University Press, 2007

peasant who moves to an urban factory, but also a mobility of identity, as capitalism restlessly creates and destroys whole industries and regions where production flourishes or declines. Global capitalism morphs into the new control society of flows, making us flow along, reinventing ourselves as necessary. The new order, as true of new China as of the older metropoles of modernity, engineers the consent of the governed through its use of metaphors of mobility and the opportunities mobility makes possible. Yet global capitalism, contrary to classic capitalist conceptions of flows of labour and capital to spaces of highest efficiency, also disrupts flows, especially human flows, behind mercantilist barriers and state boundaries. The grand narrative of mobility as the responsibility of the citizens of modernity is in no way contradicted by the actual prohibitions on mobility wielded by states. China encourages peasants to leave their subsistence farms, and in recent decades taxed them to extract surplus value for investment in industrialisation, forcing them off land that could then be mobilised for higher efficiency. Official discourse encouraged mobility, a willingness to plunge into the sea of commerce, even at a cost of eating the bitterness of disrupted families, low wages, job insecurity and uncertain futures, because this is how patriotic citizens improve their human quality and contribute to nation building. Yet the same party-state persists in inefficient statist, top-down allocations of labour, maintaining regulatory distinctions between ethnicities, rural and urban residents, and genders. The party-state positions itself as the embodiment of scientific development, a higher rationality, the peak of human quality incarnate, the exemplar all should aspire to. In this sense it is far from becoming the compliance society Foucault sees as emerging in the metropoles, and more closely resembles the old disciplinary society in which social engineering is the state's pedagogy. The party-state perpetuates the tradition of the dynastic annalists in claiming authorship of the lives of its citizens, maintaining vigorous agency in shaping individual lifeworlds.

Mobility does not mean freedom, in the sense that modernist romantics imagine the nomad lives a life of freedom; but nor is the mobility of contemporary liquid modernity merely a choiceless compliance with the hegemonic project of the all-powerful party-state that engineers the consent of the governed, according to its predetermined agenda. Despite the ingrained habit of Confucianist states to imagine themselves in command of all lives, all destinies, contemporary China no longer fits such a simplistic totalising mould, if it ever did. Although the regime insists on taking credit for all successes, and censoring mention of failures, street level China has its own bold, emergent, entrepreneurial flows of capital, land, labour and human capital that are barely regulated by the party-state. The vibrant, even chaotic, speculative, high-risk new China acts first to seize opportunities, and only later generates a rationale, such as statist authorship of what worked.

But in Tibet, the nomads languish in the old disciplinary society, where little happens outside the purview and surveillance of the state, so intensive is the investment in technologies of control and disrupted mobility. The immobilisation of the nomads is but part of the immobilisation of Tibetan society, into closely watched small neighbourhood grids, where all movement is monitored by ever-present surveillance cameras watched by huge numbers of immigrant Chinese security officials who seldom speak Tibetan but take behaviour on camera as signifier of mental intent, and punish accordingly. The panopticon project of early industrial modernity lives on in China's remotest provinces, where the apparatus of disciplining the masses results in tertiary sector employment dominating the whole economy. Prison guards, security agencies, file keepers, monitors of behaviour public and private: these are bigger than the nomadic, farming, mining and industrial economies of Tibet put together, as Andrew Fischer reminds us.

The disciplinary society China has created in Tibet not only confines people in institutions, but has made all of urban Tibet an institution, locked down, segmented into quadrats, under constant surveillance even when people are at home. To be Tibetan is to be suspect, requiring surveillance and discipline. To be an educated Tibetan, even a cadre or minor official is to be especially suspect, forever monitored for any sign of disloyalty. The best to be hoped for is to be provisionally free to circulate, a right the party-state can always withdraw. As Kafka reminds us, in disciplinary society, apparent acquittal, between confinements, is as much as can be achieved. China's disciplinary society can always declare one guilty of revealing state secrets, which covers anything declared retroactively to be a state secret. The definition of state secret is a state secret.

THE ARABLE AND THE WASTE LAND

Even China's dissident intellectuals in this century have depicted nomadic life as animalistic. Wang Lixiong, before he fell in love with a Tibetan dissident and greatly changed his thinking, wrote in *New Left Review*, in 2002: *"To find oneself in the harsh surroundings of the Tibetan plateau is to experience the mercilessness of nature, the arduous task of survival, the loneliness of the heart. Settlements on any scale could not subsist in most of the region, resulting in tiny human colonies that have clung on in the face of the vast, raging forces of nature. Encountering, alone, this savage expanse of earth and sky inevitably produced a feeling of being overwhelmed by such preponderance, a terrifying sense of isolation and helplessness, repeated down the generations. In that frightful environment, humankind can scarcely persevere without some sense of divine guidance and support. Any resistance was disobedience to the divine will and would be met with suitable punishment. This staunch belief moulded the Tibetans' attitude of passive submission. The roots of their intense religiosity lie in the terrors of their natural environment -the explanation, surely, for the extraordinary proliferation of deities and monsters within Tibetan Buddhism. Fear formed the core of the Tibetans' spiritual world. Only by propitiating their terror, by offering sacrifices to it in complicated ceremonies, by worshipping and obeying it, could one feel safe and free, reassured by its vast dominion and tremendous power."*[38]

Settlement is the norm, the natural desire of all human beings, but in Tibet, according to this horrified perspective, the mercilessness of nature prevented the Tibetans from settling. Modernity, with its power of dominating nature, has the urban solution.

This may explain why China never invested in strengthening the livestock economy of the Tibetan plateau, and instead imposed onto it a new economy, of extraction enclaves, transport corridors, hydropower stations and urban hubs, with few linkages to the traditional mode of production. Rather than following the textbooks, investing in adding value to what Tibet's comparative advantages suited it for, China landed another economy, superimposed on a landscape ill-suited to enclaves of intensive production.

Since Tibet was being aided to enter history, for the first time, to step onto the ladder of social evolution, there was little point in adding value to the wool and butter the nomads produced so copiously. What was objectively necessary instead was modernity with Chinese characteristics.

Agriculture can be modernised, intensified, agglomerated, consolidated and industrialised. But the grasslands remain problematic. Arable agricultural land, or rather its comparative scarcity in China, has long been a fundamental that successive regimes have struggled with. China's proportionally limited endowment of farmland is a major constraint, initially for feeding the masses and preventing famine, later for expansion of farm production, especially as urbanisation eats up much farmland, and much is polluted by industrial wastes.

An alternative way of framing Chia's "us and them" mindset, its division into centre and periphery, Han and non-Han, normal and abnormal, is to consider the distinction between farming and grazing land. In China, only arable land counts. When China explains itself to the world, especially the achievements of the party-state, the dearth of arable land is often to the fore, proof that China has successfully overcome many difficulties. All the non-arable land is usually categorised as waste land, unproductive and even an obstacle to development. Yet the waste land –a common term in Chinese- includes nearly all the pasture lands, which are far bigger than all the arable farmland in China.

China's master narrative is of triumph over nature, which directs the gaze towards the intensively cultivated farmland and the cities, and away from the rangelands. Although Chinese traditions –Confucian, Taoist and Buddhist- all emphasize harmony with nature, China decisively turned its back on such tradition a century ago and instead embraced the Western drive for dominion over nature as the source of wealth, power, efficiency and modernity. Even those who do speak up for the environment in today's China use the language of instrumental efficiency, arguing that the long term costs of environmental destruction are higher than the economic gains to be had by further industrialisation.

38 New Left Review, March 2002, reprinted in Wang Lixiong and Tsering Shakya, The Struggle for Tibet, Verso, 2009.

This results in sharp differentiation between land that is amenable to human manipulation for productive purposes, and land not suited to production, or is productive only if human interventions are kept to a minimum. China makes a sharp distinction between two types of production landscape: the arable lands that can be cultivated, and the waste lands that cannot be ploughed.

Around the world, rural policy is designed to cover all production landscapes, the intensive and the extensive, the cropping areas and the pastoral areas, and the agro-pastoral regions in between where crops are grown and animals are kept. It makes no sense to separate agricultural areas from livestock production areas, and treat them with quite different policies, rules, laws, bureaucracies, taxation and subsidies. Yet that is what China does.

If only arable land counts, and all else is considered waste land, China's sense of having to triumph over a meagre endowment is constantly reinforced. Meanwhile, what millions of Mongols, Uighurs, Tibetans and others regard as their home pastures, is officially categorised as waste land.

Environmental policy specialist Peter Ho writes *"According to the statistics, China had a total of 108 million ha of undeveloped land or wasteland in 1995. Wasteland varies from forested hills and mountains in the subtropical region of Yunnan province to the dry steppe and pockets of desert in the Inner Mongolia autonomous region. According to the definitions of the Chinese Ministry of Agriculture, this undeveloped land can be divided into wasteland, waste mountains, sandy waste and waste gullies (huangdi, huangshan, huangtan and huanggou). The term 'wasteland', however is misleading as a great portion of this land is use by peasants for animal grazing, small scale forestry, etc."*[39]

In China, rural policy usually means agricultural policy, meaning grains, crops, bulk commodities, bulk handling, feeding the masses, creating market mechanisms that keep urban consumers happy and enable farmers to leave poverty behind, usually requiring considerable expenditure on subsidies. The pastoral lands, far bigger than the farmed lands, are mentioned as an afterthought, if at all.

Waste land is waste because it has no imaginable human use, no conceivable role in the ongoing project of building modernity and national strength. It may have a marginal role in providing a risky bare subsistence for a handful of primitive people who know no better, or have no better opportunity, but that is as much as such land can support. Thus the verdant grasslands are no different to those lands that are truly uninhabitable, including the mountain peaks above the vegetation line, the glaciers and lakes, the alpine deserts of the Tibetan Plateau, and the sandy riversides where roaring floods occasionally dump deep loads of sand scoured from a plateau eroding as fast as it uplifts. All these landscapes are waste, none are to be thought of as production landscapes, even if a few scattered folk can survive on certain waste lands. That has long been the deeply imprinted attitude.

This, for a brief time, led to the absurdist policy of auctioning waste land, to the pastoralists who badly needed more land beyond their fixed allocation decreed by officials, usually barely enough for overwintering, not sufficient for summer or spring and autumn, times for moving herd animals along to other pastures. In the brief period in the early 1990s when an official experiment with auctioning waste pastoral land was allowed, not in Tibet but far downriver in Shanxi, "The commissioning party (the village committee) is simultaneously the auctioning party, and worse, sometimes also the buying party. This can and does give rise to monopolization and the abuse of power by village cadres." On paper the herders have been able to regain some of their land; in reality local cadres have found new opportunities for rent-seeking. The experiment was halted.

Much of China's grassland policy is experimental, written in haste to meet a short term problem, without an overall strategy. That is the conclusion of those who have looked closely, seeing like a state, to discern what is and is not encompassed in national legislation, policy and institutions of grasslands governance. One example is the Animal Husbandry Law which, along with the Grasslands Law, might be supposed to provide the basic framework for life on

39 Peter Ho, The Wasteland Auction Policy in Northwest China: Solving environmental degradation and rural poverty? In Peter Ho, Jacob Eyferth and Eduard Vermeer eds, Rural Development in Transitional China: The new agriculture, Cass, 2004, 121

the rangelands in all aspects. However, the Animal Husbandry Law of 2005[40] is remarkably short, sketchy, vague and concerned only with specific aspects of livestock breeding. In no way does it provide a comprehensive roadmap of what is (and is not) to be done on the rangelands. Nor is there any comprehensive policy document for the rangelands clarifying priorities and directions.

The most comprehensive analysis of China's livestock laws and institutions, published in English and then in Chinese in 2009, by Australian agricultural economists,[41] points out that: *"The law deals mainly with production aspects of the livestock sector. Original drafts included other parts of the supply chain to build a more integrated industry approach. However areas like slaughter were taken out. Some efforts were also made to incorporate animal welfare in the wording of the legislation but the term was taken out as legislators thought the term lacked precision."*[42] As a result, this law has been received, by those most immediately affected, as little more than a set of guiding principles. The Australian team, having been closely involved with the process, concluded that:*"Fieldwork by the authors at the provincial level and below following proclamation of the Animal Husbandry law revealed divergent though mainly indifferent perspectives on the law. The consensus was that the content of the law was very general in nature. Guidelines are given for work to be carried out in the case of disease outbreaks but there is no mention about which department should do it."*[43]

This is not unusual. Laws in China are seldom detailed or specific, in a system where rule of law is still a new concept gaining traction. But the Animal Husbandry Law is exceptionally limited, focussing only on the prospect of creating higher-yielding breeds, rather than dealing with everyday realities, or big-picture questions such as the balance of priorities between herder livelihoods, conservation, intensifying production, and natural resource management for downstream beneficiaries of ecological services provided by the grasslands.

These are the big questions, which have never been answered with clarity. Neither in law nor in authoritative policy pronouncements by the party and the State Council have these competing priorities been reconciled, or ordered. At least the Animal Husbandry Law is more useful than the Combating Desertification Law of 2011 which: *"was drafted as a response to international programs, namely the United Nations Convention to Combat Desertification. The Combating Desertification Law may be perceived as the international face of what China is doing in regard to grassland degradation."*[44] The passing of this law made China eligible for UNCCD funding. Yet it includes contradictory exhortations to local governments to be both more supportive and more punitive towards pastoralists. "*The approaches used to influence household behaviour are through more secure tenure arrangements to encourage sustainable grazing practices and through the imposition of fines on activities that lead to 'serious desertification.'"*[45] In reality, despite these incentives and disincentives, the increasing reliance on grazing bans cancels the land tenure security of the pastoralists, in contravention of the provisions of this anti-desertification law that appears to have risen without a trace.

Contradictions, confusions and piecemeal approaches abound in the party-state's efforts at governing the grasslands. Troy Sternberg, an Oxford expert on drylands pastoralism and deserts writes that: *"the Chinese system defies simple explanation. Policy ineffectiveness precludes the simple or direct resolution of ongoing problems. Laws are passed by the central authority to meet national goals such as 'developing the west' and providing employment; provinces are concerned with programs, revenue and meeting economic goals rather than environmental costs; local townships focus on tax generation, protecting private-access pasture and income sources, and immediate productivity;*

40 http://en.pkulaw.cn/display.aspx?id=4865&lib=law&SearchKeyword=animal%20husbandry&SearchCKeyword

41 Colin Brown, Scott Waldron and John Longworth; Sustainable Development in Western China: Managing people, livestock and grasslands in pastoral areas., Edward Elgar, 2008 Brown, Colin G., Waldron, Scott A., Longworth, John W., 赵玉田Yutian, Zhao and 黄向阳Xiangyang; Sustainable development in Western China: 中国西部草原可持续发展研究: 管理牧区人口、草场和牲畜系统, Huang *Sustainable development in Western China: Managing people, livestock and grasslands in pastoral areas.* 中国西部草原可持续发展研究: 管理牧区人口、草场和牲畜系统. Beijing, China: China Agricultural Publishing House, 2009.

42 Brown et al Sustainable Development, 159

43 Brown et al Sustainable Development, 160

44 Brown et al, Sustainable Development 92-3

45 Brown et al Sustainable Development, 92

rather than creating pastoral sustainability or meeting national goals or laws."[46]

Conflicts between national, provincial and local governments are common in China, probably more so than ever as responsibility for welfare, health, education and many other services has been downshifted to local levels without ensuring they have sufficient revenue base to implement these responsibilities. Yet grassland policy is especially inconsistent, even incoherent. As Sternberg notes, when the party-state shifts to new priorities, it does not repurpose existing instrumental agencies, instead it sets up new agencies alongside the old ones, often all within one ministry, to fight it out. This may not fit with the frequent assumption that China is a monolithic authoritarian state in which the central leaders issue orders and everyone salutes. But it does fit with those who know China well. The reality is that official institutions at a local level which have their own revenue stream will win out over the longer term than other agencies or official bureaus that rely solely on central financing from above. That is what determines which aspect of contradictory policies will prevail.

46 Troy Sternberg, Review of Colin Brown et al, Sustainable Development in Western China, International Development Planning Review 31, 3, 2009, 327-8

A Nomad and his herd, Tibet, 2012

Chapter Two:
China's Rangeland Ideologies: Productivism Versus Sustainability

China's focus is on the productivity of the grasslands, whether measured in the past by meat output, or, more recently, by their production of environmental services to distant users, notably water supply to industries and cities far downstream. From the outset, China's "grass industry" has seen the pastoralists only as means to productivist ends, who may comply with modernist plans for intensification and be rewarded, or fail to modernise, and be penalised.

Thus it is that as China's edicts and laws governing the grasslands proliferate, an increasingly punitive regime emerges, as the pastoralists continue to fail to meet China's productivist expectations.

Other key Chinese terms are also revealing. The term "grassland construction" has been in use since the 1950s to signify investment in irrigating pasture lands and/or sowing grasses which may produce more than native grasses. Grassland "construction" is encouraged in official policies, though seldom with sufficient monetary incentives to make the practice worthwhile, in dryland areas. Another term often used over recent decades is "grassland reclamation". Originally, in the revolutionary decades when human will was held to overcome all natural obstacles, this had a positive meaning, usually the ploughing of grassland in an attempt to make it arable land for crop production. That meaning changed drastically, as it gradually became clear that breaking the steppes is a major cause of erosion and dust storms, so much so that "reclamation" is now banned, and those who do it are penalised.

All of these keywords are suffused with the ideology of productivism, that all resources must be made by human will to produce more for human use. Grass industry, grassland construction and grassland reclamation all place human agency at the centre, the grass being the object of human exertion, for the purpose of meat production. To reclaim is to salvage what is useful out of what has been a waste land. To construct what China calls "artificial grassland" is to improve pasture by applying capital and technology. Construction, reclamation and grass industry all presuppose that grassland is, in and of itself, a poor substitute for the productive landscapes of the peasant farmers on their arable land, which is the only land that really counts in feeding China. Grassland must be improved, and if the traditional pasture users fail to comply, they are an obstacle to be governed by a regulatory regime that increasingly excludes them.

At first, it seemed China's promise of modern, scientific development could achieve the productivist vision. The official *Statistical Yearbooks* for all five Chinese provinces into which the Tibetan Plateau is divided, show steady increases in herd numbers, throughout the two decades of the communes, ending around 1980, as the commune system disintegrated, pastoralists got their animals back and regained decision-making capacity after decades of powerlessness. In the commune decades all power was in the hands of cadres, who issued work points according to one's labour. Survival was totally dependent on accruing work points, in a system which gave the modernising cadres greater power over life and death than had ever happened in "feudal" Tibet.

There is much reason to suppose the statistics of those revolutionary decades were inflated by zealous cadres keep to report fulfilment or over-fulfilment of official production quotas, yet in each of the five provinces, in each of the 20 years to 1980, animal numbers grew. If they grew beyond what pastoralists knew the land could sustain, they had no say. The continuous series of errors begins with the disempowering of Tibetan pastoralists and the herd build-up.

The increase in herd size began off a low base, as the battles between desperate nomads and the People's Liberation Army in the late 1950s saw huge numbers of yaks requisitioned by the army as pack animals to haul artillery across Tibet and over the passes, animals later slaughtered to feed the troops. According to calculations by historian Li Jianglin, in her book*, When the Iron Bird Flies: 1956-1962 Secret War in Tibet Plateau,* based on the memoirs of Chinese military commanders, as many as 800,000 yaks were taken by the PLA. [47]This was followed immediately by famine, the worst Tibet has ever known, yet even as people starved, food was sent from Tibet to inland China. The famine lasted in some areas until 1962.[48]

If we take 1965 as a base year, the number of sheep in Tibet Autonomous Region was 7.99 million, having recovered from war and the famine years. By 1970, this had risen to 8.96 million, peaking at 12.49 million in 1979, as the commune system began to dissolve. Thereafter, as Tibetan pastoralists regained agency, and could decide how many animals to keep, the number of sheep rapidly declined to 10.86 million in 1985, and has remained between 10 and 11 million every year since then, up to 2009, when the national sheep herd size dipped further to 9.68 million, and further still by 2012 to 8.41 million, even though TAR is not an area of grazing bans in pastoral districts.[49] There is a similar pattern in Qinghai, where the sheep raising areas are overwhelmingly Tibetan, with herd size peaking in the late 1970s at 14.75 million, thereafter dropping considerably, in the 1980s, and further still in the 1990s –all before official grazing bans- to as low as 13.7 million in 2000; thereafter rising again –despite grazing bans- and again falling to an average of 12.7 million in the most recent years for which statistics are available. In 2013 there were 12.685 million sheep in Qinghai. This is hardly the animal population explosion, which supposedly happened, necessitating the grazing bans and nullification of pastoralist livelihoods. The statistics for yaks, cattle, horses, goats and pigs do not show the same declines. While the number of horses has dropped considerably, in part due to the availability of motorbikes, the numbers of goats and pigs have risen considerably, as in other Chinese livestock production landscapes. Pig numbers in central Tibet (TAR) are now 344,000, in response to the immigrant presence. Goat numbers have risen to 5.63 million.[50]

The real transformation in livestock production revealed by the official statistics is the slow but steady intensification of meat production and accelerating slaughter rates, boosted by the rise of intensive production enclaves close to cities. Although production has sped up and slaughter rates increased, it has not been fast enough, and extensive production, making use of the full spectrum of plateau grasslands, is considered inherently inefficient, and lacking in scale, more now than ever. China is disappointed that its dream of greater wealth from Tibet, especially more meat, has largely been unfulfilled; and, faced with a zero/sum choice between pastoralism and water, official China has now decisively turned away from pastoral production. China has opted for access to water from Tibet as its top priority.

Yet intensification has occurred. Central Tibet (TAR) now produces 103 kg of dairy products per person, although this is far behind the commercial, highly corporatized dairies of Inner Mongolia, which produce 374 kg of dairy per person per year.[51] Meat production is 82.5 kg per person per year in TAR, well behind enclaves of intensive feedlot animal production such as Inner Mongolia, Liaoning, Jilin and Hainan, all over 90kg. Similarly the grain yield per hectare in TAR has reached 5.5 tons, better than many provinces, but behind frigid Jilin's 7.25 tons. TAR also produces these days 656,000 tons of vegetables a year,[52] a major modern fact making the lamas' campaign for abstention from meat feasible. Central Tibet also produces 9745 tons of fruit a year, mostly apples and pears. TAR has even become an exporter of garlic, selling 1846 tons a year to other provinces, and 1287 tons of ginger.

Yet none of these increases in production have deflected China from its firm conviction that the pastoralists have

47 http://www.linkingbooks.com.tw/LNB/index.aspx

48 Jasper Becker, Hungry Ghosts: China's Secret Famine, John Murray Ltd., 1997 Frank Dikotter, Mao's Great Famine: The history of China's most devastating catastrophe, 1958-1962, Bloomsbury, 2010 Yang Jisheng, Tombstone: The Great Chinese Famine, 1958-1962, Farrar, Straus & Giroux, 2012

49 Tibet Statistical Yearbook 2009, table 9-24, Number of Livestock at year-end Tibet Statistical Yearbook 2013, table 8-24

50 Agricultural Yearbook 2013, 127

51 Agricultural Yearbook 2013, 94

52 Agricultural Yearbook 2013, 113

abused the pasturelands, and grazing bans that reduce food production, and may even endanger food security, are an objective necessity.

Where Tibet has failed the test of modernity is in meat production. The official 2013 Agricultural Yearbook table for "Major Livestock and Poultry Offtake by Regions" lists 1.29 million yaks slaughtered annually in TAR, and 5.29 million sheep and goats. This produced a total of 252,000 tons of meat, a trifling 0.3 per cent of China's total domestic meat production, of 83.9 million tons.[53] Dairy production was greater: 256,000 tons of milk annually in TAR, plus a further 60,000 tons of other dairy products.

These increases in production, most notably in the Tibet Autonomous Region, less so in the many Tibetan Autonomous Prefectures and Counties outside TAR, have raised incomes, but Tibetans remain poor, especially when compared with urban incomes, or with China's inland and coastal provinces.

Economist Andrew Fischer has written over many years of this extraordinary inequality of wealth between the heavily subsidised urban centres of Tibet, and the neglected countryside where most Tibetans live. In a book length analysis of China's statistics, he points to the paradox of central Tibet (TAR) manifesting, in China's statistics, as a province of fast growth and high incomes, due to an extraordinary level of subsidies coming in from Beijing.[54] Yet the rural Tibetans remain poor, in an economy that supplies little to the cities in Tibet, and almost nothing to lowland China. For a long time, revenues raised by the TAR government within Tibet have been no more than ten per cent of TAR government expenditure, the remaining 90 per cent coming from Beijing. There is no other province remotely like this dependent on the central leaders.

In 2013, animal husbandry earned rural residents of Qinghai just 887 yuan per year (US$145), only 14 per cent of their annual income, in a province that, by area, is 95 per cent Tibetan, some of which is farmed, while most is pasture land.[55] This is less than the 915 yuan the average rural dweller in Qinghai spends annually on health care and medicines.[56] In the most Tibetan prefectures of Qinghai, notably Yushu and Golok, where nomad removals are concentrated, average rural incomes are as much as 30 per cent below the provincial average. In Golok Tibetan Autonomous Prefecture in 2013 average per capita rural income from all work including livestock production was 4261 yuan (US$697) and in Yushu Tibetan Autonomous Prefecture it was 4090 yuan (US$669).[57]

In central Tibet (TAR) official household survey data show rural Tibetans earning on average 1639 yuan in 2012 from animal husbandry, a big increase on the previous year, due to rising meat prices across China. However, that is gross income, before taking into account the costs of production, also rising. Net income from animal husbandry in TAR was 1186 yuan (US$194), considerably less than what rural Tibetans spent on food.[58] By comparison, urban dwellers in central Tibet –immigrant Han Chinese, and Tibetans- spent 11184 yuan per person in 2012, or US$1829.[59]

CHINA'S INSTITUTIONS OF GRASSLAND GOVERNANCE

Although China's vast grasslands attract little international attention, except when they generate problems, such as dust storms, affecting distant but powerful populations downwind, there are specialists who monitor the grasslands closely. Among the closest observers is a team of agricultural economists from the University of Queensland, who

53 China Agricultural Yearbook 2013, 129-130

54 Fischer, Andrew Martin.; The Disempowered Development of Tibet in China : A Study in the Economics of Marginalization, Rowman& Littlefield, 2013, https://rowman.com/ISBN/9780739134382/The-Disempowered-Development-of-Tibet-in-China-A-Study-in-the-Economics-of-Marginalization

55 Qinghai Statistical Yearbook 2014, Table 6-9: Per Capita Income and it's composition of rural households in main years.

56 Qinghai Statistical Yearbook 2014, Table 6-10

57 Qinghai Statistical Yearbook 2014, Table 6-15

58 Tibet Statistical Yearbook 2013, Tables 7-16, 7-17, 7-4

59 Tibet Statistical Yearbook 2013, Table 7-11

have, between them, a century of experience working closely with Chinese administrators of the rangelands, chiefly in Inner Mongolia.

This team has published much, offering detailed understandings of how China governs its grasslands, based on their experience of working closely with China's policy makers and implementers of policy; drawing also on the accumulated experience of Australia's livestock producers, as the grasslands of inland Australia and inland China are the two biggest in the world.

In their many publications, this team provides, in granular detail, the workings of China's great project of modernising the rangelands, always careful, in the spirit of international co-operation, to adopt a quiet tone. When their reports are read carefully, innumerable policy mistakes and state failures are evident, arising out of sedentary China's unfamiliarity with rangeland dynamics and pastoral landscapes, and China's underlying desire to make the unfamiliar familiar by making the rangelands much more like arable farming lands.

Seldom does this team disagree with the ultimate modernist goal of intensified production, by commercial livestock enterprises, turning over animals for slaughter as soon as they attain maximum weight gain. The agribusiness model of a meat and fibre commodity production chain is a model they share with their Chinese counterparts. They are orthodox economists of rural productivism, with no interest in agro-ecology, subsistence or use economies, or traditional mobile pastoralism as a combination of production and biodiversity sustainability. This makes their observations of failure all the more poignant, coming from a perspective shared with their many Chinese colleagues as to the long term goal of the rangeland production landscapes.

Colin Brown, Scott Waldron and John Longworth, all fluent in Chinese, noted in 2008 that China has "an extraordinary number of plans, edicts, laws, regulations, standards and programs related to grasslands"[60], and since 2008 the list of power projections onto the grasslands has only grown. They devote a chapter to a careful analysis of this regulatory framework, both for coherence of policy and "the disjuncture between policy setting and implementation."[61] Having done so much fieldwork in China's grasslands, not only in Inner Mongolia but also in Xinjiang, starting in the 1980s, they are well placed to assess the difference between central edicts and actual events on the ground. It is not often we get to see close up how national policies play out in remote areas.

Their focus is specific and technicist. They explicitly refuse to engage with bigger questions of epistemology and minority nationality rights: *"This chapter does not review or enter into the debates surrounding the 'pseudo-scientific' versus 'indigenous knowledge' approach or about any alleged cultural repression of minorities."*[62] It is this narrowness that lends weight to their critique, which arises from personal experience in the field.

In their section on "Edicts and Plans", they point out the ongoing commanding role of the state: *"As a legacy of the Central Planning era, the Party-State has directed economic, social and environmental programs through five-*

60 Colin Brown, Scott Waldron and John Longworth, Sustainable Development in Western China, Edward Elgar, 2008, 84 Longworth, J.W. (Ed.), 1989. China's Rural Development Miracle. University of Queensland Press, Brisbane. Brown C., Waldron S. and Zhao Yutian 2011. Policy settings to address grassland degradation and promote sustainable development in western China. In 'Development of sustainable livestock systems on grasslands in north-western China', ed. by D.R. Kemp and D.L. Michalk. ACIAR Proceedings No. 134, 105– 114. Australian Centre for International Agricultural Research: Canberra. Waldron S.A., Brown C.G. and Longworth J.W. 2010. Grassland degradation and livelihoods in China's western pastoral region: a framework for understanding and refining China's recent policy responses. China Agricultural Economic Review, in press. Waldron S.A., Brown C.G., Longworth J.W. and Zhang C.G. 2007. China's livestock revolution: agribusiness and policy developments in the sheep meat industry. CAB International, Wallingford, UK. Waldron S., Brown C. and Zhao Yutian 2011. Developing the right institutional environment to deal with grassland degradation. In 'Development of sustainable livestock systems on grasslands in north-western China', ed. D.R. Kemp and D.L. Michalk. ACIAR Proceedings. Colin Brown, Scott Waldron, Agrarian change, agricultural modernization and the modelling of agricultural households in Tibet, Agricultural Systems, 115 (2013) 83–94 Colin Brown, Scott Waldron, Liu Yuman and John Longworth; Forage-livestock policies designed to improve livelihoods in Western China: a critical review; China Agricultural Economic Review, Vol. 1 No. 4, 2009, 367-381 Scott Waldron, Colin Brown and John Longworth; Grassland degradation and livelihoods in China's western pastoral region: A framework for understanding and refining China's recent policy responses; China Agricultural Economic Review Vol. 2 No. 3, 2010 pp. 298-320

61 Brown et al, Sustainable Development, 2008, 84

62 Brown et al, Sustainable Development, 2008, 86

year plans and 'rule by edict.'"[63] They focus on two key documents, the *Grassland Opinions* issued by State Council in 2002, and Ministry of Agriculture's *Grassland Plan* of 2002 and 2007. They discern an "overriding logic" and 'the not-easily-observable systematic nature of the entire suite of policies" in these and other foundational policy statements. However, the linkages are mostly to be found when these edicts specify penalties pasture users must pay for policy infractions. The emphasis is on limits, restrictions and disincentives. The key documents of 2002 emphasize "basic grassland protection, retaining grassland-livestock balance, rotational grazing, grazing bans and restrictions, and the return of cultivated land to grassland."

GRASSLAND, RANGELAND AND 'GRASS INDUSTRY'

The emergence of a largely restrictive, even punitive regime early in this century is hardly surprising, given that there is, from the outset, no equivalent in Chinese, of the English language distinction between a rangeland –a pastoral production landscape, and a grassland –an ecological vegetation category with connotations of prehuman naturalness, even wilderness. The key distinction is the human presence, and the animals tended by humans. Having two words naturalises both landscapes, making them both legitimate. China has no word equivalent to rangeland. China instead speaks only of "grassland", understood implicitly as wilderness undisturbed by any human presence; or of *prataculture*, a term that is quite obscure in English, but is a direct translation from the Chinese 草业 or *cao ye*, which more literally mean "grass industry". China thinks of its grasslands as extremes, as wilderness or for their industrial potential, as the name of its leading journal indicates, both by title and contents: *Acta Prataculturae Sinica.*

The growing reach of the state and its intensifying exclusionary policies can be tracked through the multiple laws and edicts governing the grasslands. In 2008 the Australian team listed and commented on the key documents, notably the 2002 *Grassland Opinions* issued by State Council, and Ministry of Agriculture's *Grassland Plan,* mentioned above. Other laws impacting on grassland governance are the *Rural Land Contract Law* of 2003, the *Agricultural Law* of 2002, *Animal Husbandry Law* of 2005, *Cooperative Law* of 2006, *Natural Protected Area Law* of 1994, the *Feed Law* of 2005 and *Seed Law* of 2004. The Australian agronomists also mention the *Environmental Law, Water Pollution Law, Solid Waste Pollution Law* and *Air Pollution Law* as also impacting on grassland management.

To this list of 13 laws must be added the *Combating Desertification Law* of 2001, and more recent laws and amended laws, including amendments to the *Grassland Law* in 2011 and 2013, amendments to the *Agriculture Law* in 2012, and the *Grassland Expropriation Law* of 2014.[64] One could also add the Open Up the Great West campaign, *xibu da kaifa*, announced in 1999. Taken together, these add up to an unprecedented extension of state power onto the rangelands, backed by the stationing of administrative personnel at local levels, to ensure implementation.

The conclusion, in 2008, of the Australian experts was that this welter of official prescriptions and programs to achieve several objectives. One is to define scientifically objective standards that enable measurement and corrective measures that maintain a proper grassland-livestock balance. As most of China is grassland, but of differing climates and soils, a single scientific standard of what constitutes normal and abnormal stocking rates is no small achievement.

A second objective discerned by the Australian experts is the prescription of incentives and disincentives, as means of enforcing the grassland-livestock balance. They write: "One way of looking at the plethora of policies directed at the grasslands is in terms of a 'carrot and stick' approach. The 'stick' approach in isolation has failed in the past partly because of weak institutional capacity and conflicts of interest."[65]

If a balance of incentives and disincentives appeared in 2008 to be the overriding logic, "even though the

63 Brown et al, Sustainable Development, 2008, 87

64 Measures for Review and Approval of Grassland Expropriation and Occupation (2014 Revision) **草原征占用**审核审批管理办法(2014**修**订) [现行有效]

65 Brown et al, Sustainable Development, 2008, 85

plethora of policies appears on the surface to be uncoordinated in intent and sequencing" we must also ask whether that balance has since been maintained, as China has shifted to seeing much of the grasslands as a provider of environmental services.

That shift exacerbates a tension long present in the various laws and policies, between China's two requirements of the grasslands, for productivism, and sustainability. These are the governing desires driving grassland policy, yet they pull in opposite directions. If there is coherence to be found in China's approach to its mid-20th century discovery of its grasslands, and their potential for modernity, it is in the interplay of these drivers. Initially, the ideology of productivism was everything, and sustainability a minor consideration. Today it is the other way round, with the primary purpose of vast areas of grassland now defined as areas which produce only environmental services for distant beneficiaries, whether as dust storm prevention zones protecting Beijing, watershed protection zones protecting the parched North China Plain, or as carbon sinks that may soon attract global investment to offset carbon emissions elsewhere. Insofar as the grasslands are valued in and of themselves, it is for their usefulness to others far from the range.

This gradual shift has taken decades, is ongoing and far from complete. The institutional legacy of the shift is a large number of entrenched bureaucracies implementing one of these two agendas. These competing objectives are embodied by institutions, often side by side in the same ministry, or, at a local level, in adjacent rooms in the township or village government office. Although sustainability is in the ascendant, it is productivism that generates cash flow and revenue, enabling its institutions to persist long after their purpose has been superseded.

As the Australian team says, from experience, "the number and diversity of programs and the fluid mix of existing and new programs creates enormous challenges for co-ordination across the programs and in providing a consistent set of signals to herders."[66]

MAKING PASTORALISM MORE CAPITAL-INTENSIVE

If there is a consistent signal to the lumpen category of "herders", to be found inside this suite of laws, regulations and edicts, it is that the authors of these laws are not thinking of the pastoralists as positive contributors to the ongoing health (environmental and economic) of the rangelands. Almost nowhere in the edicts is there any positive policy for enhancing the customary pastoral mode of production by the usual rural development programs of value adding. There is no concern for the ongoing viability of pastoral production. The emphasis is almost solely on "grass industry", the intensification of production in enclaves suited to industrial production by their proximity to cities. The focus is on animals as genetic resources, including traditional breeds likely to be swept aside as new breeds are introduced, but which should be saved in case they turn out to be useful. Above all, the focus is on specific strategies to intensify meat output: "*The stated intent is to increase grassland production capacity through improved fencing, water infrastructure, livestock pens and sheds, forage and seed storage, artificial pastures, improved pastures, controlling degradation and increasing monitoring.*"[67]

This adds up to a long list of extra work for the pastoralists, turning them at least partially into farmers who must not only fence their allocated land but, within the allocated area, fence off fields to be sown with fodder crops to be later harvested and stored as winter feed. These requirements necessitate extra labour at the busiest livestock production season, in summer, in an economy that has always been short of sufficient labour in summer; and further requires investment of capital for fencing materials, pens, ploughs and storage sheds. Poverty alleviation programs were meant to pay much of these costs but in practice many pastoralists went into debt to fulfil these mandatory requirements. A major reason for chronic labour shortages is the fragmenting of the pastoral economy into individual households, each with a separate contractual obligation to the state. This contravenes the customary pooling of decision-making, and of herd management, by groups of families, often known as a *rukor*, which not only shares

66 Brown et al, Sustainable Development, 2008, 85
67 Brown et al, Sustainable Development, 2008, 85

knowledge of rangeland dynamics but also aggregates herds, even allowing the seasonal formation of specialised herds. This shared herding is more efficient, and less labour-intensive, but is not recognised at all by the Household Responsibility System that replaced the communes, in the 1980s, or by subsequent legislation.

In short, the pastoralists on one hand are deemed to belong to specified areas, with unclear rights to graze herds seasonally on the common pool lands beyond their fences. On the other hand, they are treated as an undifferentiated mass of unskilled workers available to move to wherever industrialised meat commodity chains can make best use of all factors of production, including their labour.

Whether Tibetan pastoralists learn official China's policy signals is doubtful. What pastoralists do recognise is that policies keep changing, and implementation is accompanied by corruption, which makes actual outcomes negotiable and inconsistent. Here, in the writings of a pastoralist, is a description of officials seeking the payment of the pasture user fees stipulated in the Grassland Law:

"We would have to move to our autumn pasture soon, and then the distance to the town would be much greater. Father also brought news that the township clerks would come to count the number of animals several days later for tax purposes. Father said that everyone in the camp needed to hear about the tax clerks' imminent visit and told Older Brother to tell the head of every family. The news spread very fast. An hour later, everyone in the camp knew about it. The elders decided we should move to the autumn pasture immediately, to avoid being taxed. Their decision was reasonable, since we had already paid taxes that year. The government had decreed taxes should be collected once every three years, but there was much corruption and policies often changed. Each year, we moved from our summer camp to a winter camp, and sometimes we had a spring camp and an autumn camp as well. We moved at least twice a year, but often moved three times. If there was a summer drought, the grass withered and became fragile. Passing herds broke the grass and trampled it into small bits. Even the slightest breeze blew it away, leaving only the yellow soil. In order to prevent this, we moved to the autumn camp if there was a drought. I was thrilled at the prospect of travel and looked forward to the journey with a tremendous feeling of optimism. We took down the tent the night before we moved camp to reduce the workload the next day. That night was the only sure opportunity for me to sleep outside in the whole year. I loved sleeping outside, especially under a cloudless sky sparkling with stars. There is a star for each person. That night, I pointed to a very bright star in the boundless sky and said, 'That is my star.'"[68]

The 2002 State Council's authoritative "*Opinions on Strengthening Grassland Protection and Construction"* add greatly to the workload of the pastoralists, for both the opposing goals of construction and protection. The protection measures work against the construction measures. The construction work of fencing, farming, ploughing, harvesting and storing grain comes along with protection measures for "retaining grassland-livestock balance, rotational grazing, grazing bans and restrictions." The pastoralists are required to do more with less. Nowhere is this pressure acknowledged.

Nor is the core contradiction between construction and protection apprehended. Construction imperatives require concentrating herds for all, or most of the year, on winter pastures, behind fences, with overgrazing the inevitable result of this drastic curtailment of customary mobility, the key strategy over thousands of years of Tibetan pastoralism for preventing over-grazing. The inevitable over-grazing is then dealt with punitively by the protection measures that, since the 2002 State Council document, have become the predominant concern of regulators.

Throughout, the primary focus has been on grass, not on pastoralists or pastoralism, specifically on grass industry, or *prataculture*. Grass industry initially required "herders" as the necessary labour force available to industrialise the grasslands, but the planners have moved on, transfixed by the prospect of making the rangelands into the ranch lands of America, in which mobile nomadic pastoralists have very little, if any, role to play. Neither in the current pastoral production landscape, nor in its planned modern transformation, as envisaged by these edicts, are pastoralists central, except as obstacles to modernity.

68 Karma Dondrub, Tibetan Nomad Childhood, Asian Highlands Perspectives #26, 2103, 26-7

THE CONCEPTS OF LIVESTOCK BALANCE, AND SCIENTIFIC STOCKING RATE CALCULATION

Perhaps this intensifying legislative emphasis on disciplining pastoralists is best illustrated by the *2005 Grassland-Livestock Balance Regulations*, which decree a punitive regime based on rational, scientific, objectively measured definitions of carrying capacity and stocking rates. These attempts at creating a scientised norm go back to the 1980s. As Brown et al pointed out in 2008, this is not a new objective and the same Australian team had in 1993 commented on earlier iterations of this exercise in determining mathematical formulae applicable to governing each herder's annual grazing strategy.[69]

This exercise effectively seeks to duplicate the accumulated knowledge of pastoralists who have demonstrably managed their pastures for as much as 9000 years, with little evidence of degradation until the modern state extended its reach into the rangelands in recent decades. Not only does it seek to replicate traditional knowledge but, perversely, to achieve this without listening to, or even acknowledging the existence of such knowledge. Thus the project is *sui generis* and *de novo*, starting from scratch. As China's rangelands cover much more than half of all of China, with grazing conducted in areas with rainfall less than 100mm a year to over 600mm a year, at altitudes from close to sea level to above 5000m, any calculation of carrying capacity must be local, and the *2005 Grassland-Livestock Balance Regulations*specify that in each locality the rate is to be calculated locally. In 1993 the Australian team reported: *"very little enforcement of either the stocking limits or fines at the village level. This is partly due to the inaccuracy and irrelevance if the limits."*[70] But, writing in 2008, the 2005 Regulations had barely begun implementation, because: *"establishing stocking rate limits is a very challenging and time consuming process for several reasons."*[71]

In Chinese, carrying capacity is *yicao ding xu*, which literally means "defining livestock by grass", a simplistic concept of creating a mandatory upper limit on the permissible number of livestock in a given area, calculated solely by the biomass (above ground and thus measurable) of grass. This sole criterion of rangeland health supplants, as we shall see, complex and ongoing assessments and reassessments by Tibetan pastoralists of the health of pasture and herd and the uses of mobility in maintaining both optimally.

A major reason fixed stocking rates are a poor management tool is that in the drylands there is no "normal". Among philosophers of science this is the familiar problem of indexicality.[72] The assumption that there is a norm to be found, if only fieldwork is sufficiently diligent in gathering data, presumes grasslands to be ecosystems in equilibrium. That is a circular self-fulfilling presupposition that used to be central to the science of ecology. Its' starting point was that an ecosystem exists, and seems to have existed over a long period, therefore its very persistence means it is in equilibrium. Even when an extreme event occurs –a drought, a fire, a flood- it will return to equilibrium. If that equilibrium can be measured, captured, defined and quantified, then it becomes possible to define the limits of human use before equilibrium is endangered.

But grasslands are grasslands and not forests, because there is insufficient rainfall to support forest. The grasslands of the world are the drylands of the world, between the deserts and mountain peaks that are too dry or cold (or both) to support vegetation, and the farmlands and forests of the wetter areas. The drylands are unpredictable; the exceptional is unexceptional. China has struggled to pin down the numbers that enable formulaic stocking rate limits to be set, and "the Regulations specify that exceptional years can result in an adjustment of the stocking rates according to formulae based on weather coefficients."[73]

However, the whole purpose of making mandatory a set stocking rate is that it will operate in a coming year or years, applicable to seasons ahead. No "weather coefficient" can reliably predict dryland weather, especially in

69 John Longworth and G. Williamson, China's Pastoral Region: Sheep and wool, minority nationalities, rangeland degradation and sustainable development. CAB International, 1993

70 Brown et al, Sustainable Development, 2008, 105

71 Brown et al, Sustainable Development, 2008, 105

72 Woolgar, Steve; Science, the very idea, Tavistock Publications, 1988.

73 Brown et al, Sustainable Development, 2008, 106

Anthropocene times of overall shifts in climate. Tibetans know from experience that a thunderstorm or even a snow storm can appear out of nowhere very quickly, even in midsummer.

China is chasing a figment of the scientistic imagination, made more unachievable by a failure to commit funding to the longitudinal measurement of agro-ecological variations necessary to fix a stocking rate in one area. Writing in 2008 of Xinjiang, the Australian experts note that *"the survey work has been constrained by lack of funds, personnel and technology. The last comprehensive survey of the grassland census was conducted in the 1980s. Consequently claims often arise that shortcuts are made in the survey process. This can include an over-reliance of satellite imagery as opposed to on the ground measurements, imprecision in sampling methods, and an unrepresentative number of trial areas. In Hefeng County samples to set the county stocking rate limits were being taken from only four sites within the county."*[74] Four sites hardly capture the variety of modes of production.

Satellite imagery in turn relies on norms for the interpretation of data, assigning differing colours to differing vegetation, and rates of growth. Values for European and American vegetation, where satellite imagery was first used, have been adjusted for the grasslands of China. The result has much scope for error and misinterpretation. It is not uncommon, at Chinese scientific conferences on grasslands, to meet scientists with a record of publishing research papers based on satellite data interpretation, who have spent almost no time on the grasslands.

From the distance of the capital, a scientifically determined stocking rate seems a good idea, as the basis for intervening in the lives of pastoralists, armed with the superior knowledge of objective, evidence-based, data-driven stocking rate calculations. Yet in practice, to have any local validity, science must effectively replicate the complex calculus undertaken by herders several times a year, as they weigh prevailing circumstances against their accumulated knowledge of risks and opportunities, uncertainties and probabilities. In effect, science must duplicate what has long been a standard practice, yet must begin from nothing, as if this customary knowledge is invisible and non-existent. Only then can the state claim advanced understanding of the laws of nature, enabling and entitling it to intervene. The laborious absurdity of starting with a blank slate, and a cultivated amnesia as to what has gone before, necessitates a huge monitoring and data capture effort which, in reality, the party-state has neither appetite nor finance for. Yet a numerical stocking rate must be promulgated, because it is foundational to all claims made by the party-state to objective truths that must be obeyed, and the creation of a disciplinary regime that frequently excluders pastoralists from pastures, as a scientific necessity. Inevitably then, the announced stocking rates are arbitrary, making no sense to the pastoralists. As the Australian experts suggest, official policy, and its' implementation, should be coherent and consistent, "providing a consistent set of signals to herders."

If the pastoralists are to accept the necessity for major social engineering interventions such as closure of pastures, they need to have policy explained, in a language they speak, and to see what it is based on. In reality almost all aspects of this process usually fail. Usually there is little attempt by cadres and local officials to explain the underlying logic of official policy, which is transmitted down to local levels from the centre as a fixed quota of people to be moved out, or a fixed area in which grazing is to be banned. For the officials, the only business to be transacted when the local community is assembled is to decide which families will move away, and not be allowed officially to return or resume livestock production. The only item on the agenda is fulfilling the quota. The overall policy, for all its apparent coherence in the metropolis, may make as little sense to local officials as it does to the pastoralists. But the local government must meet the quota; that is all that matters. The future employment and promotion prospects of local officials depend directly on meeting quotas sent down from above.

ADDING A NEW BUREAUCRATIC APPARATUS

It is quite common that local officials of the Grassland Stations, who are meant to inspect and enforce stocking rates, decide to live peaceably in the local community and do no more than is necessary to collect grassland use fees,

74 Brown et al, Sustainable Development, 2008, 106

a major source of their income. But then a new directive comes from above, and enforcement becomes imperative. The Australian experts, having taken care to inspect these inspectors, note that *"There are large numbers of grassland inspectors at township level. However severe budget constraints at local levels in many pastoral areas means that grassland stations often struggle to meet the costs and it is not uncommon for wages, which make up the majority of costs in running the stations, to go unpaid. There are widespread concerns that levels of training are too low while another issue is the number of retired staff that appear on the payroll of the Grassland Stations."*[75]

The underpaid and undertrained grassland inspectors themselves usually have little idea of the logic behind official policies transmitted down the line for them to enforce, and they have little enthusiasm, as rent seekers, to alienate the pastoralists on whom their incomes depend, by explaining at length the ultimate purpose of policies they may not themselves comprehend. Everyone knows the quota must be fulfilled, little else matters.

At the local government level, officials are responsible for providing health care, education, poverty alleviation program delivery and many other services which are no longer the responsibility of central leaders. Poor counties have poor governments that struggle to meet those responsibilities, even if they are eligible for top-up central funding for poverty relief, usually available only if the poor county or poor township is able to provide matching funding. *"In general most local areas struggle to sufficiently fund grassland stations. County and township government in grassland areas are almost always in deficit and have limited sources of tax and fee revenue that can be retained at local levels. Therefore sources of funding for the grassland stations are confined to grazing fees based on the number of livestock units held by households or allowed under stocking rates as well as fines for transgressions. One adverse response to limited local funds is for inspectors at local levels to allow and even encourage households to increase stocking numbers. This can increase grazing fees."*[76]

This is one of many perverse incentives, at local level, to capture the regulatory powers conferred from above, for the immediate gain of the rent-seeking officials. In the short-term, pastoralists may be glad to see an incomprehensibly restrictive stocking rate bent, in practice, but in the longer term, this only builds up pressure, from the highest levels, for a more severe crackdown later, even total exclusion of pastoralists from the very land to which they had been allocated long term tenure rights not long ago.

The beginnings of that crackdown was the invention of a new bureaucracy, the *Grassland Monitoring and Supervision Centres,* which began appearing in 2003. *"By 2020 it is planned that every county with a significant grasslands area is to have a grasslands monitoring centre although the source of funding to achieve this is unspecified. The scope of activities entails a major replication of roles between the Grassland Monitoring Centre, the Grassland Division of the Animal Husbandry Bureau and the Grassland Station."*[77] The Grassland Monitoring and Supervision Centres, as their name indicates, are tasked with further measuring of grasslands, collection of statistics and enforcement of mandatory stocking rate limits, *"more focused on supervisory roles and less involved with the production oriented roles. The Centre can be seen as a move toward recentralizing grassland inspection and management functions away from the decentralized and localized system. The disadvantage of this more centralized system is that higher level inspectors are in a poor position to know what is happening on individual grasslands. In many cases local officials and herders simply refuse to comply with directives, pay fines, or even allow inspectors on their grasslands."*[78]

FAILING TO COMMUNICATE

The Australian team further notes that: *"At the local level little understanding exists of grassland protection issues and the trade-off between livestock numbers, grassland condition and incomes. Although considerable work has been*

75 Brown et al, Sustainable Development, 2008, 66
76 Brown et al, Sustainable Development, 2008, 68
77 Brown et al, Sustainable Development, 2008, 69
78 Brown et al, Sustainable Development, 2008, 69-70

done in this area both in research organization and in various State hierarchies, very little of it has reached village level. Changing mindsets held for many generations by leaders, let alone households, at a significant number of villages across vast pastoral areas is a daunting and expensive task."[79]

If central policy is meant to operate as a transmission belt, delivering fixed stocking rates down to local officials who then go out to pastoral communities to implement quotas, and if this transmission is meant to be coherent and consistent, delivering not only grazing bans but also signals recognisable by the herders, the system is not working. In today's world, it is markets that deliver signals to producers, and policy analysts want governments to do the same, so that pastoral producers not only comply with grazing bans but also understand themselves as "ecological migrants" sacrificing their land and livelihoods for the greater good of not only downstream China but a world in need of environmental services, water and carbon capture.

If that is what is meant to happen, then the failure is total. Not only do the pastoralists find official edicts odious and incomprehensible, so too do the local officials meant to enforce compliance. Policies that, at national level, appear scientific, consistent and necessary, manifest in local communities as arbitrary, incomprehensible, punitive and above all, impoverishing. If the system works, in the narrow sense that compliance is achieved, even without any free, prior and informed consent, it succeeds because there is no alternative to compliance. There is no market of ideas, policies, signals or negotiated outcomes, just incomprehensible commands emanating from what is still a system of command and control that calls itself a market.

What the pastoralists do understand is that China is focused on grass, not people. Every law, edict, policy statement, production strategy and conservation program is designed to maintain, protect and grow more grass. Whether such programs increase or decrease the incomes of pastoralists is a secondary consideration.

"Grass industry" is the sole preoccupation of the official mind, nakedly evident in the compulsory closing of pastures to grow more grass, a literal translation of the dominant official slogan for the future of the grasslands since 2003, *tuimu huancao*.

It is not only those official programs that exclose pastoralists from their land that valorise grass and disempower the pastoralist grassland users. The priority of grass over people also underlies programs aimed at increasing pastoral production. For almost three decades pastoralists across the Tibetan Plateau have been urged, incentivised and required to fence the boundaries of their allocated land, and within those boundaries to further fence off, plough, sow and harvest fodder crops for supplemental animal feed during winter. On paper, these programs could raise the incomes of pastoralists by increasing winter survival rates, if only the nomads had farming skills, the capital to invest and the time, in the summer peak season to be farming as well as managing livestock. But the objective is not income generation as a poverty alleviation goal in itself. The whole point is to persuade pastoralists to reduce herd size by selling more beasts into the market, in the knowledge that more will survive.

The key objective is to reduce herd size, speed up turnover of animals, and accelerate slaughter rates, all so as to relieve over-grazing, and grow more grass. It is an intelligent strategy, but in practice incentivisation and compulsion, especially compulsory herd size limits, create only a perception among pastoralists that the state is always interfering, in ways that seem confusing, contradictory and incoherent, but usually to the detriment of ongoing pastoral livelihoods, almost always resulting in poverty or the danger that one bad season, or one prolonged illness in the family will tip the entire family, the mandatory unit of pastoral enterprise, into poverty or even destitution.

Slaughtering animals each autumn is a necessity for pastoralists, both for their own survival through winter, and to prevent herds from getting too big for the meagre fodder supply in winter. But the distaste, even distress at slaughter is evident when Tibetan pastoralists speak directly to us: *"When I woke up and went outside the next day, three huge yaks were in the yak enclosure. Five sheep were in the sheep pen. I also saw Dondrub walking to the pen. In our camp,*

79 Brown et al, Sustainable Development, 2008, 74

killing was taboo for everyone except for one man from the poorest family, who earned money that way. Dondrub was our camp butcher. To look at him, you would never have guessed that he specialized in taking animals' lives. He was in his twenties and a very handsome young man, but he'd had the bad fortune to be born into the poorest family in our camp. Mother told me his father was the former camp butcher and he had followed in his father's footsteps. Whenever he was skinning a sheep, he constantly chanted something under his breath. I saw great sadness on his handsome face and realized that the world desperately pulled him into things that he didn't want to do, but over which he had no control. I felt pity for him. I walked over to help him, in order to scatter his sadness. Not knowing where to begin a conversation I asked, 'Do you like to kill animals?' Before answering, he smiled. It wasn't an ordinary smile. It was neither happy nor sad. It was a smile of desperation. He asked me the same question, 'Do you like to kill animals?' I wanted to say 'No,' but I suddenly realized nobody had ever asked me a question like that before. I spent some time thinking about it. I found I couldn't say, 'No,' because I had once killed some small birds with stones for fun. But, I couldn't say, 'Yes,' because I felt very bad after killing the birds, and my parents forbade me to kill. I thought hard about it, carefully considering how to answer. My brain gurgled like boiling water. Not knowing how to answer my question and his, I said, 'We could be good friends.' He burst into laughter, and so did I. Later, I developed a very good relationship with Dondrub. He is still one of my best friends."[80]

The privileging of grass over all else distresses the pastoralists, the Australian economists note: *"Although programs such as Reduce Grazing Return Grasslands set aside grassland areas they are at the same time encouraging cultivation of grassland to meet the feed requirement of the penned livestock. Much of this new feed land is located in the better grassland areas. The practice of using the' best' part of the grassland for forage crops places even greater grazing pressure on the remaining severely degraded pastures when they are available for grazing."*[81]

That has been the lived experience of the pastoralists, and their perception is that each time state power reaches further into the grasslands they end up poorer, with fewer animals, greater debts, greater risk and greater vulnerability. Their traditional strategy was predicated on all their wealth, capital, security, collateral and social standing being their herd on the hoof. The concept of *nor*, usually translated as wealth, encompasses everything that wealth connotes, including social security and a safety net in old age, the ability to pay a dowry for a daughter's marriage, and the ability to recover as soon as possible from a disaster such as an unexpected snowstorm that can quickly kill many animals.

The state has extended its scrutiny to make the herd size, grass growth and herding practices legible from a great distance, but state power has not extended to providing social security, accessible education, or livestock disaster insurance. Life is no more secure as a citizen of a modern state; it is less secure, due to herd size limits and grazing bans imposed for no reason that makes any sense to the pastoralists or to local officials.

DISSONANCE

China has long been sure the vast grasslands can be modernised, building a grass industry to replace what seems from afar to be a low-productivity pattern of land use. Yet, on closer inspection, the vision of a modernised, intensively productive grassland remains elusive, unmeasurable, unexpectedly complex, frustratingly variable, with no norm to make foundational to subsequent progress. Governing the grasslands has become a wicked problem, a problem with many facets but no obvious solution. The more policy innovations seek to achieve the standard requirements of modernity, notably productivity and sustainability, the more they inadvertently produce poverty, fragmentation of land management and contradictory policy objectives operated by competing bureaucracies.

The dissonance between visions of modern grasslands and ground realities is hardly unique. There are other policy areas where goals and objectives clash, yet persist, generating perverse outcomes. Nor is such dissonance

80 Karma Dondrub, Tibetan Nomad Childhood, Asian Highlands Perspectives #26, 2103, 57-8
81 Brown et al, Sustainable Development, 2008, 120

unique to China. But the dissonance has persisted now for many decades, and is steadily shutting down a pastoral way of life, and sustainably productive landscapes, in the name of elusive abstractions such as scientific stocking rates, provisioning of environmental services for distant down river populations, carbon sequestration and intensive feedlot ranch enclaves of meat production. Most of these abstractions remain official hopes for the future, rather than actual demonstrable policy successes, yet they drive policy, while the steady impoverishment of the pastoralists is seldom noticed.

FROM PRODUCTIVISM TO SUSTAINABILITY

It is tempting to imagine that had China not intervened in the governmentality of the Tibetan pasture lands, that sustainable and productive pastoralism would be thriving today, but of course we can never know. What we can know is that China had to intervene, in order to *be* a government, a modern state with capacity and will to extend government into remote areas where it had never had any presence. Whatever one makes of the endless arguments over the historic and legal status of "China's Tibet", not even the most chauvinist Chinese nationalist would argue that on the ground, in the grasslands, China had any presence in Tibet, until the 1950s.

Governments need problems that they can solve, or propose solving, in order to have a role, extend their reach and project their power. The problem to be solved must be more than that the state is weak and/or society is strong. The state, if it is to be accepted as a modern state with legitimate roles to play in society beyond extractive taxation, must justify its presence as a solver of problems. There can be a solution only after a problem can be found. China's embrace of "Mr. Science" provided the method to find the grasslands problem. It has proven to be quite easy to generate problems requiring state intervention*. "Statistics, maps, numerical tables, and their collation in specific formats can become the basis for producing new forms of knowledge that make some actions seem naturally more appropriate than others as an invaluable aid to the process of government."* Agrawal's example is the forests of the Raj, *and "the use of numbers and statistics to organize the vast amounts of new information that had become available about India's vegetation and landscapes since the end of the eighteenth century. From the mid-nineteenth century on, the increasing importance of timber revenues, the sheer quantity of new information, and the belief that more systematic exploitation of the subcontinent's vegetation was in order led to institutional innovations in the form of new departments of forestry in all the major provinces. These institutional changes went hand in hand with the training of a new cadre of forestry officials, who saw themselves as the guardians of India's vegetation and timber. In a sleight of mind that challenges the imagination, they portrayed themselves as guardians of forests at the same time as levels of timber exploitation reached unprecedented heights. Part and parcel of this mental legerdemain was the portrayal of other actors who might be interested in forests –timber contractors, merchants, shifting cultivators, peasants, and revenue department officials- as ill-intentioned or ill informed (or both) about preservation of the environment."*

So China has now given greater emphasis to sustainability of its' "grass industry", while retaining the institutions that persist in pushing the productivist agenda, with the pastoralists caught between these competing ideologies.

A Nomad resettlement camp near Machen, Amdo, 2012

Chapter Three:
Consequences Of China's Rangeland Ideologies: Degradation, Poverty, Outmigration, Exclusion

CHINA SETS TIBET'S DIRECTION

China argues that it follows objective "laws" of development that apply worldwide. An official White Paper issued in 2013 on "Development and Progress of Tibet" argues that*: "The development and progress in Tibet is in accord with the rules for the development of human society, and reflects the mutual aspirations of the people of all ethnic groups in Tibet. It is the natural result of the overall development and progress of China as a whole. The development and progress of Tibet mirrors the victory of human society's enterprising spirit and creativity in the quest for justice and happiness, and has proved the inevitability of history. The development and progress in modern Tibet results from the innate logic of its social and historical environment, and has its roots in China's progress in a larger context. Its development is in line with the advance of world's modern civilization."*[82]

What is it that can be called a historic inevitability, obeying the rules for development and the innate logic of social and historical environment? There is nothing inevitable about taking much of the most productive pasture of the Tibetan Plateau out of production, because a command and control economy decrees that water production supplants animal production, on the mistaken assumption that, to use a common Chinese phrase," there is a contradiction between grass and animals."[83]

There is nothing inevitable about an economy that is dominated by massive central subsidies designated for "leap-style development" of a province unable to raise even 10 per cent of its fiscal expenditure through its own revenues. The fast growth rate of the Tibet Autonomous Region has been driven by massive capital expenditure on industrial, extractive and urban infrastructure, while investing little in the pre-existing indigenous economy of farming grain and raising livestock. This centrally mandated force-fed fast growth is aptly defined by one of the few economists of contemporary Tibet, Andrew Fischer, as "Disempowered Development."[84]

What China appears to mean by "the rules for the development of human society" is the argument of economists that favour concentrating investment capital in those places best endowed with the key factors of production, notably land connected well with markets, requiring labour –a major factor of production- to move to where the capital is concentrating. That convention of economic efficiency is what Deng Xiaoping embraced when he called for some (the best endowed) to get rich first. That neoliberal orthodoxy, in sharp contrast to the Maoist redistributive command economy, is far from what has happened in Tibet. Tibet never quite abandoned the command economy, under direct control from Beijing. If anything, the decades of Deng's "opening up" were in TAR the decades of an expensive nation building infrastructure investment program that emplaced highways, railways, fuel pipelines, high voltage long distance electricity cabling, hydropower dams, extraction zones and urban construction; all financed by central leaders. This is not a "natural result", nor "the inevitability of history."

82 Information Office of the State Council of the People's Republic of China; Development and Progress of Tibet, October 2013,http://news.xinhuanet.com/english/china/2013-10/22/c_132819442.htm

83 Du Xiaojuan and Cheng Ji-min; Analysis of Formation Causes of Grassland Degradation in Damxung County of Tibet and Its Exploitation and Utilization; Journal of Anhui Agricultural Sciences , 2007 BaoFenglan A Study of The Countermeasures of Optimizing Animal Husbandry Structure of Inner Mongolia;Journal of Inner Mongolia Normal University (Philosophy & Social Science) 2005-06

84 Andrew Fischer, The Disempowered Development of Tibet in China: a study in the economics of marginalization, Rowman& Littlefield, 2013

Fischer writes*: "Subsidies have increased both in real per person values and as proportions of government expenditure and GDP. The TAR has nonetheless maintained its relatively privileged priority, to the extreme and somewhat perplexing extent that direct budgetary subsidies from the central government exceeded 100 percent of the GDP of the TAR for the first time in 2010. This was higher than even the heights of intensive subsidization during the Maoist period. The resurgent subsidies resuscitated growth in western China and especially in the TAR and Qinghai, where growth accelerated to very rapid, above national-average rates in the late 1990s. The speed of economic growth in the TAR and Qinghai over this period was phenomenal, even by Chinese standards. For instance, the nominal gross domestic product (GDP) of both provinces grew at a rate about one-third faster than the national economy from 1997 to 2010, even though the national experience has been perhaps the fastest (and definitely the largest) experience of sustained rapid economic growth the world has ever seen. Indeed, from 1997 to 2007 (the year before the outbreak of large-scale protests), the GDP of the TAR quadrupled, versus a tripling of the GDP of China as a whole. The pace of change has been astonishing, as has been the extent of subsidization driving this change."*[85]

"In essence, the argument of this book is that the intensified economic integration of Tibet into regional and national development strategies on these assimilationist terms has, in turn, intensified various dynamics of subordination and marginalization faced by Tibetans of all social strata and despite the evident material improvements in their living standards. These dynamics are partly—although not entirely—reflected by rapidly rising inequalities within Tibetan areas that have accompanied different phases of rapid growth, some aspects of which had reached levels much higher than anywhere else in China in the 2000s. Most activities outside traditional farming and herding (and the booming trade in caterpillar fungus) in the TAR and, to a lesser extent, in other Tibetan areas have been by and large the construct of subsidization policies. Even changes in the Tibetan rural areas have become increasingly dependent on subsidization, such as the subsidies driving investment into chicken production in rural parts of the TAR near heavily subsidized towns and cities. Hence, privilege and polarization are driven much more by the hierarchy of position within the flow of these subsidies. State-sector employees in the TAR benefited from among the highest salaries in China since the beginning of the Open the West Campaign, neck and neck with those of Beijing and Shanghai for several years, which has had nothing to do with productivity or overall prosperity considerations in the TAR."[86]

"The TAR economy has been changing rapidly, but the local Tibetan population has been rendered very marginal as agents causing the change at the aggregate level, even if they reap some benefits. Their contribution to the indigenous village-based economy is huge, no doubt, but this economy has shrunk rapidly as a source of value relative to the rest of the economy, and much of the surging activity within the rural economy is subsidized by the government in any case. In this sense, the agency and "ownership" of development is located largely outside of Tibetan hands and this situation has been accentuated as the economy becomes progressively less agrarian and rural. The resulting economic structure in Tibet—including the broader political economy structure of entitlements, incentives, compulsions, and distributive conflicts—is effectively very similar to that of a colonial-type economy. Indeed, the degree of aid dependence in the TAR is far greater than even the most aid-dependent countries of Africa, and the degree of disempowerment is more or less on par with that of an occupied region."[87]

"The more pressing question is whether the integration of Tibetans into the emerging structural and institutional patterns of development in Tibet has accentuated their disempowerment in the governance of their home-land and in the 'ownership' of their development, whether or not this necessarily results in some form of deprivation. In sum, within a context of continued political disempowerment of Tibetan locals, centrally directed development strategies since the mid-1990s have channelled massive amounts of subsidies and subsidized investments (relative to the local economy) through Han Chinese–dominated state structures, corporations, and other entities based outside the Tibetan areas, thereby accentuating the already highly externalized orientation of wealth flows in the local economy. This has resulted in a socio-economic structure that increasingly and disproportionately rewards a small upper stratum servicing and/

85 Fischer, 5
86 Fischer, 11, 12
87 Fischer, 24

or operationalizing the development strategies, which have remained excessively hinged on decision making in Beijing) to a far greater extent than any other region in China. The upper stratum includes a small minority of Tibetans and a large proportion of non-Tibetan migrants, concentrated mostly in urban areas and well positioned to access the flows of wealth as they pass through the region with increasing velocity. Whether or not the ongoing outcomes are intended to be discriminatory, these structural and institutional dynamics effectively accentuate the discriminatory, assimilationist, and disempowering characteristics of development."[88]

Nonetheless, China's official view is that benevolent statist interventions have worked wonders. The 2013 *White Paper on Development and Progress in Tibet* states*: "Over the past 60-odd years, Tibet has finished a course of historical journey that would normally take several centuries or even a millennium for the human society to complete. It has written a spectacular chapter in the history of mankind. At present, Tibet presents a picture mixing traditional and modern elements, featuring economic and political progress, cultural prosperity, social harmony, sound ecosystem and a happy and healthy life for the local people. We may gain valuable enlightenment from Tibet's extraordinary journey. Tibet's development can't be separated from the choosing of a right path. Over the past 60-odd years, by adhering to the path of socialism in the arms of the Chinese nation, the people of all ethnic groups in Tibet have become masters of their own country, society and fate, and Tibet has made the dramatic change from a place of poverty and backwardness to one of prosperity and civilization."*

PARALLELS WITH FORCIBLE DEMOLITION OF VILLAGES FOR CHINA'S URBAN EXPANSION

This means the Tibetan pastoralists have common cause with villagers throughout China, whose land is forcibly appropriated, for urban and industrial use. It means violence should be understood as including more than physical intimidation; it is a systemic discourse of superior power, and the right of officials to declare local populations a hindrance to development, necessitating their removal. It is not just greedy property developers and corrupt cadres who overstep the legal ways of reclassifying rural land as urban; it is a system of disempowerment of farmers and herders, who are disadvantaged by being seen as recalcitrant, unruly, archaic obstacles to the imperative of modernity.

While the Tibetan pastoralists have much in common with China's displaced farmers, there are major differences. Villagers can and do protest, often unsuccessfully, but sometimes they win, because they have been able to mobilise large number of people willing to face the might of the state's repressive machine.[89] Sometimes these protests are reported, generating sympathy within and beyond China, which may influence outcomes.

However Tibetan pastoralists, spread extensively across large areas, are seldom able to mobilise significant numbers. The areas from which pastoralists are excluded are now huge, and hard to defend. Current policy usually works incrementally, removing a few pastoralists at a time, rather than the total removal of a village in the path of development.[90] The reasons for removing nomads are more various than for the enclosure of a farming village. While urban growth is a factor, a huge swathe of the Tibetan Plateau is now officially designated as "restricted development zone" or even "forbidden development zone", surrounded by "red lines" signifying permanent banning of legally permitted economic activity such as pastoralism, so that the land can be dedicated to green governance goals such as carbon capture, watershed protection and rehabilitation of land degradation.

Official statements support the necessity of coercion: *"People seem to ignore the basic fact that everyone is actually a beneficiary of such policies. Without forced demolition, there is no urbanization in China; and without urbanization,*

88 Fischer, 28-9

89 Wu Zhang, Leadership, Organization and Moral Authority: Explaining Peasant Militancy in Contemporary China, The China Journal, No. 73 (January 2015), pp. 59-83

90 Huatse Gyal, Migration for Ecological Preservation? :Tibetan Herders' Decision-Making Process Regarding the Eco-Migration Policy in Gloom, Reed College, 2013

there is no brand-new Chinese society. As a result, we can say that without demolition, there would be no new China."[91] This was written by an official of a county in eastern China where three villagers had burned themselves to death in protest, generating publicity over the "Yihuang incident" of September 2010. The party paper, *Global Times*, then published under the pseudonym ofHui Chang the argument of those county officials that nothing must get in the way of the onrush of urban modernity, as the Chinese state cannot just play the role of "nightwatchman" as the neoliberal governments of late capitalism can do, benignly watching over the workings of the market. "Hui Chang" argues that despite the Yihuang protests, self-immolations, and petitions to higher authorities, progress must go on, Yihuang GDP had doubled in five years and must continue to grow fast. He writes: *"Urban construction calls for lots of demolition, and local governments cannot afford to meet soaring compensation standards. Meanwhile, many farmers, stimulated by soaring land and house prices, dream of becoming millionaires overnight through land acquisition. Relocated households bypass the immediate leadership and appeal to higher authorities. In order to implement local development strategies, local governments find forced demolition the only choice. Yihuang's incident will become part of the past in time. As long as local areas need development, forced demolition should be promoted*."[92]

The quest for a brand-new China now embraces not only rapid urbanization as the destiny of the rural populace, but also the construction of "ecological environment civilisation," especially in Tibet, providing the world with proof of China's green credentials. These emergent purposes, for which large tracts of land are officially designated, involve the creation of new kinds of value, which, by comparison, devalue traditional uses as unproductive. In the case of farmland that becomes urban land, the sharp rise in land value is often directly financed by state investment in economic stimulus and capital expenditure projects intended to accelerate urbanisation. The result is a steep jump in the value of the land in contention, a jump that justifies its expropriation as logical and necessary. The process is furthered by the reliance at local government level on revenues gained by reclassifying, expropriating and then selling newly urban land. That revenue stream not only enables the well connected to accumulate wealth, but provides much of the revenue local governments need in order to meet their obligations to provide education, health and other human services, as responsibility for such costly services has long been downshifted by central onto local government.

In Tibet, the area enclosed is far greater, the pace is slower, the opportunities for mobilising populations to resist are fewer, and media coverage is minimal. Rather than the sudden, overtly violent removal of village and villagers, a more typical sequence on the grasslands is the arrival of a team of officials who announce a quota of people, a fixed percentage of the population of what is legally a township but in practice is a scatter of nomadic households who may cluster over winter. The team announces that for the 15 per cent who are to leave, the state will provide housing, electricity, rations, perhaps even a school or a health aid post. If the reasons for this policy are explained at all, it is presented as a temporary closure of pastures to allow the overgrazed areas to grow back. According to anthropologists who have done fieldwork in these areas, the families that opt to leave include the poor, who have too few animals to make a living, usually because of natural disaster, such as an unseasonal blizzard. Other families opting to migrate to the urban fringe have several in the family who are old and in need of access to medical care, or young children who may benefit from schooling. One the family has relocated, the able bodied adults often return to their pastures to continue livestock-raising, if official policy is not strictly enforced. Sometimes comparatively wealthy families make the move, while hiring poorer people to graze their large herds in various places. In these ways Tibetan pastoralists negotiate with the state, making provisional choices that are always open to renegotiation, much as they negotiate, and renegotiate, herd size, grazing strategies, risk management, shearing time etc.

So far, local government officials are usually willing to ignore these re negotiations. They are able to report to their superiors that they have met the quota, and that is all that is required for them to be eligible for promotion. If a head count is conducted, in the new settlement, where the residents are under the gaze of the police station that is invariably built, and numbers are down, there is always the explanation that some people are away, trading, or as

91 Hui, C. 2010. Forced demolition an inevitable pain in China's urbanization. Global Times, 18 October. Available from http://www.globaltimes.cn/opinion/commentary/2010-10/582829.html

92 www.globaltimes.cn/content/582829.shtml

urban construction labourers, rather than back on the range. In such ways, no-one loses face, and the state is declared to have achieved its objective of reducing grazing pressure. Thus far, China continues to rely on incentives as well as coercive enforcement of grazing bans, but there is no certainty that as the formerly nomadic population becomes more urban, more legible and visible to state security agencies, that rigorous enforcement will not occur.

WHY IS CHINA CONFIDENT THAT GRAZING BANS WILL REGROW A GRASSLAND WILDERNESS?

A striking feature of the *tuimu huancao* policy of "closing pastures to grow more grass" is the confident assumption in this official slogan of a direct causal connection, that grazing bans will *result* in the return of a grassland wilderness. Exactly how does closing pastureland to grazing lead so readily to growing a grassland wilderness, thus rehabilitating the ongoing degradation of grazing lands over several decades? What is the process whereby the initial step, of removing herds and herders, results in the long term restoration and flourishing of abundant vegetation? Are there intermediary steps, dots to be filled in, along the way? How long does it take to get from closing pasture to abundance of grass?

Not surprisingly, the official slogan does not explain. Slogans are meant to be pithy, memorable, and provide clear signals as to what is to be done. But elsewhere in China's abundant scientific research reports, there should be plenty of detail, of experiments that show it is possible to get from closing pasture to a great growth of grass. Without consistent evidence, the official slogan driving nomad removals is magical thinking, proclaiming a miraculous restoration of sustainability, requiring no more than the exit of herds and herders.

This is what is strikingly absent from the scientific literature. What is at stake is not only whether it is possible to get from A to B, but how. It matters much whether the herders, even if blamed as the source of the problem, are to be part of the solution, with active roles in the actual work of rehabilitation, or whether they are best taken off-stage altogether, to start some sort of (unspecified) modern life elsewhere. It matters not only to the herders whether their removal is permanent or temporary, final or experimental; it also matters to the process of recovery whether there is on hand a labour force capable of doing the necessary work, a work force with intimate knowledge of the rangelands and every reason to want rehabilitation to succeed.

Yet on this there is an extraordinary vacuum, not only in policy prescriptions but in the scientific research that justifies the policy and charts its implementation. There have been many studies, on pastures where grazing pressure is normal, that show grass biomass is indeed greater in the years following the removal of grazing pressure; though there is also evidence that greater biomass does not mean greater biodiversity. If anything, biodiversity decreases, as herbs with medicinal use are shaded by fast growing grasses no long grazed, and the herbs disappear.

But what is missing is long term studies, on badly degraded lands, areas of "black beach" or bare rock where the soil is stripped away, that show recovery, especially the return of grass if simply left alone.

Instead, China was transfixed into magical thinking, that nature can wondrously and quickly heal itself, if only left to itself, for as little as one year. That was the message of a famous book of 2008 by botanist Jiang Gaoming, published by Hydrological and Hydropower Press, *Use Nature's Force to Recover Nature*. Jiang, a leading conservationist, well-known for his involvement in the campaign to halt the damming of the Nu or Salween River just below the Tibetan Plateau, did the necessary work of investigating carefully the desertification of Inner Mongolia, and the many failed (and expensive) official attempts to reverse desertification.

He chose, as an experimental area, a portion of rangeland where *"the grassland does not degrade really and completely, and there are still various propagules (seed, spore, fruit, sprouting root, sprouting seedling, etc.) distributed*

naturally and the genes. Where its peel and ribs exist well, such propagule can revive and grow only after it rains once."[93]

To great publicity in official media, grasses and other plants did indeed grow. *"Only one year later after the start of the experiment, the turf height reached 1.43m there; the yield of grass in each mu is 5300 jin in fresh weight; the seedlings of elms naturally growing reaches 321 per square metre…… All these made herdsmen wild with joy."*

This is how the miracle was reported. Xinhua wrote*: "Large-scale degradation of Hunshandake began in the 1990s, when the local Mongolian herdsmen abandoned nomadic life and settled down in permanent houses. In 1995, every villager was allotted 23 hectares of grassland. In 2000, Jiang Gaoming and other researchers chose a 2670-hectare grassland in Hunshandake -- one third of the grasslands in BayinhushuoGacha -- to experiment a new approach to restoration. The grassland was fenced off and no grazing was allowed. unwilling to repeat the mistakes of the past, Jiang and his team shifted their focus away from re-forestation and opted for a new strategy of "nurturing the land by the land itself". To supplement the loss of forage resulting from grassland fencing, they used 67 hectares of land adjacent to the fenced area as a forage base that produced high-yield corn. Meanwhile, the 2670-hectare grassland was left to mend all by itself. "Some of my colleagues criticized me for doing nothing 'scientific' with the grassland, they said it was unworthy of a scientist", said Jiang. BayinhushuoGacha's 72 households were also dubious. "The method sounded implausible to most of the villagers," recalled Gang Temoer, the 36-year-old village head.*

"To everyone's astonishment, this "leave-it-alone" strategy paid off: in 2002, the grasses grew to a height of 1.43 meters and there was a record 79.5 tons of fresh grass per hectare. This was excellent news for the local herdsmen. Before the experiment, each household had to spend an average of 10,000 yuan (1300 U.S. dollars) to purchase forage-grass for their livestock during the winter. But in 2004, each family harvested 35,000 kilograms of grass on average, which became an important source ofincome.

"I no longer have to drive the tractor hundreds of kilometres north through the snow searching for forage for our cattle and sheep. Standing in the high grass, I feel that I am back in touch with my lost childhood", smiled Wuritu. This year's sandstorms have been much less severe, even on days with force seven winds, he said. More convincing still, wolves are returning to the grassland, not to mention the re-emergence of roes, grey cranes and pheasants. "People say there is no 'science' in the project. But repairing the damage by doing nothing that contravenes natural rhythms is true to the philosophy of nature," observed Jiang."[94]

What was not reported was Professor Jiang's careful selection of a recently degraded area in which all the necessities for recovery were still present. Instead, it was reported as a miracle, with no method. Prof Jiang, renowned for speaking frankly about state failures in tree planting strategies to control deserts, for once decided on a gnomic silence, embracing instead a dignified Taoist honouring of nature as its own cure. All people must do is get out of the way.

It is common in China, once a new norm is established, that it is applied to all circumstances requiring policy attention. That is what happened. If elm trees and grasses can sprout by themselves from degrading lands in Inner Mongolia, the same approach will work in Tibet: that seems to be the assumption. The Tao will find its way, the way of no-way, the action of non-action.

Prof. Jiang is hardly at fault for going along with the seductive idea that the only science one needs is knowing when to do nothing. He has publicly contradicted official policy many times and is, in the context of today's China, outspoken, as Xinhua called him.

Yet this offers policy makers an ideal solution, which is sure to work, is cheap, requires no outlays, and justifies

93 Grassland restoration Experiment: The 'Wise Method' of Jiang Gaoming, in Cao Baoyin and Yin Wujin: Ecological Civilization of Contemporary China, China Intercontinental Press, 2014,98-12

94 Gong Yidong, 2007-06-17 Xinhua, Ecological conservation not equal to tree planting

the removal of embarrassingly primitive nomads. The attraction, for those who think like a state, is a solution that requires no further research, no messy and complex involvement with local communities working, by trial and error, over many years, hopefully towards eventual success.

IS THERE A PLAN FOR REHABILITATING DEGRADED GRASSLANDS?

A 2008 textbook on the strengths, weaknesses, policy priorities, gaps, contradictions and failures of China's approach to its pastoral production landscapes is the fruit of an experienced Australian team, each of whom has worked in China, in close partnership with China's official bureaucracies, for the past 25 years.[95] All three have experience in the livestock production systems of Australia, which has grasslands as big as China's, and in Europe. With official assistance also from the Australian government this team was especially welcome in China, coming from a mature livestock based Australian rural economy that China seeks to emulate. The book is diplomatically phrased, so no-one loses face. The gaps and contradictions are quietly named. Within a year of this book being published in English, a translation into Chinese was published by the publishing house of China's Ministry of Agriculture.

Does this mean that between 2008 and now, China has taken to heart the policy advice, and things have since changed? Unfortunately no. The most obvious change between 2008 and now is the intensification of grazing bans, the closing of pasture lands, the exclusion of both herds and herders, often with cancellation of all or part of the allotted land tenure rights given to pastoralists only 20 years ago, with a promise of long term land security.

What has changed is that the discourse of scarcity, especially downstream water scarcity and Beijing clear sky scarcity, has intensified, and the depopulating of the rangelands has, in response, intensified. Ostensibly, this is for a noble, and global, purpose, namely to rehabilitate degraded rangelands, protect watersheds and also to sequester carbon as biomass, which in the absence of grazing pressure, should grow back into a grassland wilderness. Yet many questions arise, if we are to update the comprehensive 2008 analysis by Brown, Waldron and Longworth, who do mention grazing bans, which at that time were not so common.

The key question is whether grazing bans, often including nullification of land tenure rights, succeed in rehabilitating degrading lands. The obvious place to start answering this question is to look for the actual official strategy for rehabilitating areas that are eroding, and even desertifying. What is the actual method, once the nomads are gone, for revegetating areas Chinese scientists evocatively call "black beach", where vegetation is gone, only soil is left, which in turn is vulnerable to being swept away by the blizzards and gales that are frequent on the Tibetan Plateau? How to sow native grasses and sedges to bind the soil once again? How to slow erosion, by wind and water, and stop it cutting further into the sod? How to slow, then stop, then reverse degradation?

These are questions that are asked anywhere erosion and degradation happen, and the state finally decides to step in, with interventions intended to not only protect production landscapes and local livelihoods but also contribute to global goals such as carbon capture, food security, climate adaptation, soil conservation and the ongoing provision of environmental services by the stewards of those landscapes. There are many technical methods that work, but they all require capital investment, and much use of local community labour, since revegetation, whether this means reforestation or regrowing grasses, is usually quite labour intensive.

Around the world, states have learned to make up for past mistakes and failures by investing in the research, practical application of research, and in the local communities who are employed to do the hard work of sowing

95 Colin Brown, Scott Waldron and John Longworth; Sustainable Development in Western China: Managing people, livestock and grasslands in pastoral areas., Edward Elgar, 2008 Brown, Colin G., Waldron, Scott A., Longworth, John W., 赵玉田Yutian, Zhao and 黄向阳Xiangyang Huang; Sustainable development in Western China: 中国西部草原可持续发展研究: 管理牧区人口、草场和牲畜系统 , *Sustainable development in Western China: Managing people, livestock and grasslands in pastoral areas.* 中国西部草原可持续发展研究: 管理牧区人口、草场和牲畜系统. Beijing, China: China Agricultural Publishing House, 2009

seedlings, ensuring they survive extreme weather, thus rehabilitating damaged landscapes. The amount of investment required of the state is not large, compared to other major priorities governments spend on, but it does require governments to commit both to a strategy and to finance it. That is the worldwide lesson of rehabilitating degraded lands, though there are now complex new market-based methods, usually called REDD+, wherein polluters in a rich country pay local communities in a poor country to conserve forests, waters and grasslands, to offset the ongoing pollution.

So what is China's plan for rehabilitating the grasslands? Once the grazing animals and their pastoralist herders are removed, what is the next step? Exactly how are the grasslands meant to recover?

There is no such plan, nor a meaningful budget to support a rehabilitation strategy. The removal of the nomads and their animals **is** the plan. After that, the rehabilitation will somehow happen by itself. There is no new law, nor authoritative policy statement, no specific directive on how degradation is to be slowed, still less halted and reversed. Exclosure of the nomads is the beginning and the end of the policy response; all that remains after that is to scientifically measure the biomass in the exclusion zones, and the policy can be declared a success. Since the *tuimu huancao* (closing pastures to grow more grass) policy was announced in 2003, there is by now plenty of opportunity to make such measurements, and dozens of scientific research findings have already been published.

SUCCEEDING BY IGNORING VARIABLES

Success is defined by a single specified metric: the dry weight of above ground biomass growing in areas where grazing is banned, compared to areas where grazing persists. Like most of China's overly simplified problematics and solutions, this single yardstick is actually quite misleading, even though it is eminently measurable, by satellites in orbit hundreds of kms above the planet.

Tibetan pastoralists know from long experience that the above ground height and weight of grasses available to their herds is an important aspect of the seasonally rotating logic of a pastoral economy needs to understand. But just as important as quantity is quality. The *drogpa* nomads of Tibet know that the floristic diversity of the rangelands, especially the higher altitude alpine meadows of summer, is enormous, and many species that flourish are well known, both in *sowa rigpa* traditional Tibetan sciences of healing, and in traditional Chinese medicine, for their curative properties. That raises a different question: when grazing is banned, does biodiversity increase? The answer, according to the scientific studies undertaken, is that floristic diversity decreases when grazing pressure decreases. The reason is simple: yaks, sheep and goats chew down the fast growing long grasses, which cannot grow high enough to shade, and out-compete the lower ground cover herbs with medicinal uses.[96]

A further reason to challenge the single metric of success, conveniently accessible by remote sensing, is that in the cold climate of Tibet, with gales and blizzards, the plants keep most of their biomass below ground. In this way the hardy grasses and sedges of the Tibetan Plateau protect themselves both from the weather and from excessive grazing pressure. A pasture that looks overgrazed, especially over winter, when grasses senesce, may rebound in spring and summer, which the nomads know, but satellites don't.

As the grazing bans, in some areas, now stretch beyond a decade, a further question arises, that bothers Tibetan pastoralists but not Chinese scientists. With all grazing pressure gone, not only from domestic animals but by also fencing out wildlife such as the gazelles and antelopes native to Tibet, what actually does grow? The evidence, now rapidly accumulating, is that many areas revert to grassland, in which shrubs increasingly grow too, making the land

96 Julia A. Klein, John Harte, and Xin-Quan Zhao, Decline in Medicinal and Forage Species with Warming is Mediated by Plant Traits on the Tibetan Plateau; Ecosystems (2008) 11: 775–789 Julia A. Klein, John Harte, and Xin-Quan Zhao, Experimental Warming, Not Grazing, Decreases Rangeland Quality On The Tibetan Plateau; Ecological Applications, 17(2), 2007, pp. 541–557

less suitable for grazing, should the grazing bans ever end, as they are officially supposed to. Shrubland, from a pastoralist perspective, not only reduces the amount of palatable grasses, but makes rounding up the animals harder, and provides cover for wolves.

The absence of specific, detailed, funded degradation rehabilitation programs, even in the defined core zones of the protected areas where grazing is banned, suggests there is still no clear direction to official policy, no long-term purpose that can be discerned. Given the escalating statist interventions in the grasslands, in an era when neoliberal China, as elsewhere, gives priority to rolling back the directive state, this is strange. Why are China's central leaders drawn to intensifying encroachments on pastoral livelihoods, but without a vision of where the grasslands fit in to today's China?

Part of the answer may lie in the somewhat magical concept of "grassland", magical in the same way that forest, and especially rainforest have assumed magic qualities, attributing to them globally healing properties as 'the lungs of the earth", purifying humanity of its urban industrial sins, source of innumerable wonders, the cathedral of the post – religious urban spiritual seeker. Much has been written about the rainforest, and the romantic concept of wilderness, as the antidote to crowded, polluted urban modernity, as the ultimate Other to the alienation of contemporary life.

Grassland gets far less attention, though it too has its romanticisers. Not only are grasslands less dramatic than jungles, they have long been production landscapes, more properly called rangelands, connoting their human use. Unless one finds pastoralists and ranchers romantic –and some do- there is not the same sense of magic, because these are production landscapes, not landscapes of utter purity, pure because there is no human presence, enabling the visitor to enter, with the illusion that he/she is the first human in this pristine, untouched, *aborigino* natural cathedral.

The concept of grassland is a wilderness; the rangeland restored to its original purity, the human taint removed. It is the vision that China's great rivers rise in glacial purity in the mountains of the Tibetan Plateau, then majestically wend their way across the verdant, pristine grassland, before bestowing their bounty on lowland China.

OPENING UP THE GREAT WEST

China has never understood or appreciated the rangelands, whether in its far north or far west, as production landscapes. China is fast outgrowing its historic propensity to see these vast areas only as waste lands, in which there is nothing to be done, because nothing human is possible. Today, China inherits a nostalgia for the revolutionary era when human will was deemed capable of conquering nature and removing mountains; and has a contemporary wealth sufficient to make the re-engineering of the rangelands a feasible project. The overall slogan, coined by Jiang Zemin in 1999, is *xibu da kaifa,* opening up China's access to the great west, usually translated as China's western development Program, a translation that misses locating the agency of the speaker. From the outset *xibu da kaifa* was announced as a long term goal, which would take decades to accomplish. It has many aspects, many projects, all of which emplace infrastructure for integrating remote areas into the Chinese, and thus the global economy, usually as a base of extraction for industries elsewhere and ultimately for global markets. So broad is *xibu da kaifa* that it includes not only those provinces west of China's heartland, but also Inner Mongolia to the north, and even much of the frigid northeast adjacent to Siberia. Opening up the west is a west of elastic definition.

Does the wider context of *xibu da kaifa* give us a framework in which a coherent approach to the grasslands can be found? The thrust of *xibu da kaifa* is productivist, imagining 'the west" primarily as a source of oil, gas, coal, copper, gold, silver and many other minerals; but also water, as in the official slogan that "Tibet is China's Number One Water Tower."

However, most of the centre's capital expenditure budget for *xibu da kaifa* has gone to urban Chongqing, rapidly building this city excised from Sichuan province and made a direct responsibility of the centre, putting it on a fast track to becoming the metropolitan hub of western China, with superfast rail connections to eastern China, attracting a global who's who of famous manufactured brands to relocate their factories far inland. Together with nearby Chengdu, Sichuan's hot and muggy capital, these twin cities are the great beneficiaries of *xibu da kaifa*, the new hubs magnetising capital and commodities to flow to them. As eastern China's rising alarm at pollution grows, and factory workers' wages make China no longer the cheapest manufacturing base, productivism is shifting westwards, where wages are lower and popular pressure to reduce pollution not as articulate.

SCARCITY RETURNS TO THE HEART OF CHINA'S PROSPERITY

Overall, everything points to the ideology of productivism as the thrust of not only the revolutionary past and the present "China Dream", but well into the future, with energy efficiency added.

Yet the production landscapes of the Tibetan Plateau and Inner Mongolia are being taken out of production, as more and more herders are instructed to desist from grazing and move away to the urban fringes, or, in the case of Ordos City in Inner Mongolia, to fill the empty apartment blocks of what was often called China's "ghost city" of towering apartments in the desert.

Since China seldom considered these huge areas –more than a third of China's land area- to be productive; their reversion to pure grassland does not seem, in Beijing, to be much of a loss of production. Yet China, ever mindful of its paucity of arable land, reaching worldwide for not only food but to buy lands on which those foods are grown, dairy farms in New Zealand, cherry orchards in Australia, croplands in Africa, does need food security. The need for food security and the newly rich urban desire for a diet high in animal protein mean China is by far the biggest buyer of the American soybean harvest, mostly to feed penned animals in feedlots, to fatten them for slaughter.

Productivism rules, despite China's occasional concessions to global environmentalism. Even after China fulfils its promise to cap coal consumption, by 2030, at 4.8 billion tonnes a year, China will persist in using more coal than the rest of the world combined. Yet the pastoral production landscapes are being taken out of production.

This is due to the return of scarcity, a surprising discovery for a newly wealthy middle income regional power on the verge of realising its "China Dream." The whole point of the productivist ideology is to overcome scarcity, yet in the midst of burgeoning opulence, the price of that luxury is now embarrassingly apparent, in the dirty, dust and smog laden skies of Beijing, and in the critical shortage of water throughout northern China. Pure potable water and clean skies are public goods in great demand, in a country with a deep history of hydraulic projects that prove the competence of the emperor and thus his right to rule.

Does this mean the ideology of productivism is now tempered by conservation as a fast rising overarching concern? There is much talk of green growth, and China's Five-Year Plans now abound in targets for sustainability as well as endless growth. Many, both in China and beyond, would like to believe that GDP is no longer the sole criterion of success, that quality of life has become as important as the quantity of manufactures available for sale, yet growth remains the paramount priority.

Does the unexpected return of scarcity contradict the ongoing hegemony of productivist ideology? Scarcity of finite non-renewable resources has always been the core of the environmentalist argument against growth at all costs. China has long resisted any such limits to growth, arguing that it is now China's turn, indeed its right, to become rich, which is only restoration of China's rightful place in the world. But, on the rangelands, now redefined as grassland wilderness, productivism has been eclipsed by scarcity of water and clean skies.

Just as China never acknowledged the productiveness of the pastoral production landscapes, it does not now acknowledge the return of scarcity. While the smog afflicting Beijing is an acute embarrassment, greatly exacerbated by dust blowing in from Inner Mongolia, there have been few connections made to the chronic water shortage of the North China plain. To policy makers they seem separate problems, with nothing much in common. Seldom is it acknowledged that scarcity is back, with surprising force, and is remarkably hard to overcome.

Scarcities far from the pasture lands now drive policy on the pastoral production landscapes, but they are not the same scarcities, and the outcomes are sharply different. In Inner Mongolia, the grazing bans nomad removals and closure of extensive pastoralism repurposes the land for rehabilitation to reduce the dust storms.

IS RANCHING THE SOLUTION?

Productivism is meant to quickly intensify in the livestock industries, as Inner Mongolia becomes a major production base for feed lotted, short-lived, fast rotated animals bred on ranches as the raw materials of an integrated meat commodity supply chain keeping urban China supplied with red meat. Alongside the meat industry is the dairy industry, similarly concentrated in intensive enclaves of production, similarly supplying China's new urban rich with the dairy products that are in great demand. In both cases, the feed will come not from the surrounding grassland, which is primarily for dust-storm suppression, but from afar, especially the soybean fields of the United States.

However, on the Tibetan Plateau, there is little sense that productivism will return, in a more intensive mode, as is planned for Inner Mongolia. After the grazing bans, what? No-one seems to know, least of all the removed nomads themselves, to whom national policy makes no sense, and has never been explained to them.

Despite the many similarities, not only in natural endowment but also disastrous history of policy failures under modernist productivism, Inner Mongolia and the Tibetan plateau seem to be taking divergent paths. Inner Mongolia is well on the way to becoming not only a major heavy industrial base for the whole Chinese economy, but also the major livestock ranch agribusiness hub, specialising in grained dairy herds and expanding "cells of modernization", a term for the proliferating feedlots fattening cattle and sheep for the red meat commodity chain. Hao Yidong, an official with many years at high levels in the administration of Inner Mongolia, provides much enthusiastic detail about how to spread these cells of modernization, as he calls them. In his book, he tells many stories of prospering Mongols, their big houses, *their "high turnover of herds and high work efficiency [to] ensure high returns."* He dwells in detail on their profits and the electrical appliances to be found in their opulent homes. Hao is out to seduce the Mongols into modernity. He tells story after enticing story of Mongol ranchers making their fortune "aided by government subsidies"[97] by turning rangelands into prairies and herding into ranching, who miraculously dig wells that water the penned animals as they chew their way to muscle gain and slaughter. Where the feed comes from is seldom explained; these stories prefer to dwell on the attributes of modernity: *"Today's herders have grown more judicious, able to make decisions about their operations in light of their individual conditions and their judgement of the market situation rather than simply watching what others do and following suit."*[98]Today's herders are not only becoming rich, we are told, but also becoming self-made individuals, attuned to market signals. We are even introduced to a Mongol formerly employed to sing folk songs at a state owned tourism enterprise, who has acquired his own dude ranch and stud farm, which features "homestay yurts" for tourists, while the actual livestock production business is so easy: *"He and his wife could manage their cattle entirely on their own, thanks to the sedentary herding pattern and the introduction of modern machines."*[99]

When we are told where one acquires the feed essential to fattening beasts for slaughter, it is almost magical: *"Without large machines to help with farm work, he has invented the method of piling his maize in the field without*

97 Hao Yidong, The Way of Prairies: Grasslands and Human Civilisation, Foreign Languages Press, 2014, 279
98 Hao, 281
99 Hao, 282

chopping it up, and covering the heaps with plastic sheets to allow them to ferment. In winter time, the cattle were fed with corn silage in whole cobs which they chewed from end to end, and not a single bite was wasted."[100] Making silage out of crop residues requires anaerobic fermentation, sealing the byproducts of agriculture so completely that oxygen cannot enter, and bacterial fermentation, which raises the nutritional value, can occur. To call rotted corn waste silage seems a stretch. Tibet lacks farm wastes that could support pastoralism, because farming is climatically restricted to a few sheltered areas.

Acquiring fodder of sufficient quality that market-bound animals attain maximum weight gain in minimum time, as in America or Australia, is usually a major expense, and involves hauling fodder crops from a distance, and often necessitating onfarm production of fodder crops, which may also need to be irrigated in dryland pastoral areas. The fossil fuel and carbon emission costs are largely externalised, by convention, and not counted into the bottom line.

Ranching is not only resource-intensive, it is also capital-intensive, requiring investment in machinery to plough, seed, grow, harvest and store fodder crops in readiness for the lean winter months. However, China is committed to modern ranching, and heavily subsidises the costs of buying the machines needed. Hao Yidong takes the reader on a visit to a co-operative in Inner Mongolia "which owned a full line of large farming machinery that could handle a wide range of tasks, which the co-operative purchased with a total investment of about 1 million[101] yuan, of which subsidies from governments at different levels accounted or 70 per cent."

China produces less than 12 million tons of soybeans a year, and imports a further 74 million tons, mostly from the US, mostly used to feed animals in feedlots. China's imports are two-thirds of the global soybean trade.[102]

IS URBANISATION THE SOLUTION?

Hao Yidong's modernist vision of China's future as a livestock commodity chain modelled on the American ranch, in which a very small number of people and a huge investment in infrastructure and technology generate a massive output of meat, is in itself one aspect of the profoundly sedentary imaginary gripping China. Not only is the Han Chinese peasant past full of the sedentary virtues of rootedness, the sanctity of ploughing and the sweeping of ancestral tombs, China today defines urbanization as both means and end, as the sole route to modernity, and a destiny for all, even the most remote. Sedentary city life has become the yardstick of progress, of fulfilling "the China Dream", of lifting the human quality of the masses, and achieving a high level of civilisation.

It is not accidental that huge areas of China's rangelands are now designated primarily as dust suppression zones (Inner Mongolia) and as water production zones (eastern Tibet), as the beneficiaries are overwhelmingly urban. Policy, even on the remotest steppes, has an urban bias, and is formulated with urban needs uppermost. Policy makers seldom have direct experience of the grasslands; at most a quick "study tour" from the metropole out into the countryside, accompanied by local cadres, to inspect an agricultural research station or a major infrastructure project.

China's pride in urbanisation, explicit embrace of city life as the solution to all problems, determination to further accelerate city growth to catch up to the norm of the richest countries, all skew perceptions of the countryside, and especially of the vast production landscapes that are not amenable to cropping.

Nor is it accidental that China's neoliberal turn coincides with the rush to urbanise: they go together. The market in urban land, and in financing lower levels of government by appropriating peasant lands for nominal amounts, to make massive profits through designating it as land for urban growth, are primary engines of wealth accumulation for the elite. The neoliberal ideology of smaller government was selectively applied, starting in the 1980s, to divest

100 Hao, 283-4
101 Hao, 290
102 United States Department of Agriculture Foreign Agricultural Service; Oilseeds: World market and Trade, December 2014:

the central government of much of its responsibility for education, health, pensions and social welfare. These were quickly downshifted to local government, but without comparable access to revenues to finance these social services and delivery of public goods, especially in poor areas.

In this centripetal logic of urban as the new normal, the predestined fate of all but a few, the countryside becomes a commodity chain, a flow of foods, fibres, minerals, water and even clean skies, all of which flow to the cities. As the cities increasingly imagine themselves as eco-cities, heavy manufacturing and power generation are increasingly moved out into the countryside too, as the key strategy for dealing with the intense air pollution in most cities. Thus, in Inner Mongolia, for example, coal mines, chemical factories, power stations and exemplary desert rehabilitation projects sit alongside each other.

To become urban is to specialise, to find a niche in a system of specialisations based on comparative advantage and human quality (*suzhi*), so as to maximise productivity and efficiency. Urban wealth accumulation is accelerated by productivity gains, and the surrounding countryside must also become more productive, by narrowing its entire purpose to feeding the cities. The inexorable intensification of production, division of labour, and reduction of labour as a major cost, all require rural land to scale up, agglomerate, rationalise, get big or get out of rural production altogether and join the migration to the cities. In these ways, the entire rural production landscapes, whether cropping or livestock, or both, are appendages of the city, and subject to the same pressures to be constantly raising efficiency and productivity. Entire lifeworlds, modes of production and traditional economies that used to satisfy a wide range of human purposes must now focus exclusively on feeding distant cities, according to city specifications of product, quality and price. The cities specify what is to be produced and how, always with an eye to catching up or surpassing the most advanced countries. The fixation on ever greater consumption of everything the arable and pastoral lands can produce pays only nominal heed to the environmental costs of this agribusiness industrialisation, since nearly all of those costs can be externalised, and not appear on the books of the rural commodity corporates.

The innumerable ways in which cities drain the countryside, and extend their footprint far from city limits over the countryside, are seldom given more than passing mention. There was a moment when it seemed China –as part of becoming ultramodern- might adopt "green GDP" as a way of building in the environmental footprint of rapid growth and urbanisation, accounting for all impacts beyond the purely monetized. But the push for green GDP accounting was definitively repudiated and has faded from view.

The possibility that further future urbanisation may be unsustainable is not only rejected but hardly debated. It is denied rather than refuted. Yet already the majority of the Chinese population is urban, and much more is to come, according to all the official plans, since China sees itself as still way behind the West.

Rather than reconsider the rush further centralise, the fashion in China is for eco-cities, a concept that proposes reintroducing elements of the rural into urban life; to soften the artificiality of the built environment with elements of nature and somehow declare that the city is no longer voracious but has become carbon-neutral. A recent study of several of China's eco-cities, many of which failed to materialise, finds them to be: "breathless invocations of development without ecological cost! What's newly prominent is the role of ecology in this utopian branding of the future. The current impulse to build 'eco-Shanghai' is an effort doomed to fail, containing the seeds of its own failure. These ecologically themed developments are not serious attempts to solve Shanghai's dire environmental problems. These projects are literally a space that will somehow be both rural and urban, Chinese and cosmopolitan, natural and artificial."[103] Such visions preoccupy city planners and real estate developers, while the actual rural landscapes are neglected, depopulated, underinvested and, if remote from cities, deemed irrelevant.

The planners and central leaders accustomed to thinking like a state have a densely packed language of planning, goals, objectives, targets and market mechanisms that not only set out to accomplish further urbanisation, but also obscure rural realities.

103 Julie Sze, Fantasy Islands: Chinese dreams and ecological fears in an age of climate crisis, University of California Press, 2014, 15-17

CHINA DISCOVERS UNIVERSAL LAWS OF DEVELOPMENT

When Edward Said critiqued the Orientalism of the European gaze in the Arab world, he found a deep ambivalence. The Orient was both fascinating and repulsive, seductive and treacherous, alluring and deadly. Above all, it was everything Europe was not. China's Orientalist gaze westwards towards Tibet is these days similarly ambivalent, with a sharp split between a lyrically romantic attitude towards landscape, mountains, rivers and the timeless, always happy dancers in traditional Tibetan dress;[104] and a punitive negativity towards ungrateful modern Tibetans who stubbornly cling to their feudal superstitions and fail to respect modernity, wealth making opportunities, the Communist Party and China's benevolence.

The possibility that China's Sino centric gaze generating an imaginary of Tibet in metropolitan Chinese minds is orientalist is hardly ever mentioned. Yet the parallels with the European orientalist projections are evident. A detailed repudiation of the orientalising Chinese gaze should be a suitable topic for Tibetan writers, much as Jamyang Norbu repudiated the romantic Shangri-La fantasy versions of Tibet that long haunted European imaginations. The Tibetan objects of the Chinese gaze are also the objects of China's poverty reduction program, always poor due to the terrible, if beautiful, land they live in.

The objectification of Tibet and the Tibetans culminates in China's proclamation of several "laws" of the natural progression of development, modernity, urbanisation and prosperity, all of which, applied by China to Tibet, inevitably result in the passing of the old nomadic Tibet and the birth of an urbanised, comfortable Tibet integrated into China. Because China is benevolently helping Tibet realise its modern destiny, overcoming the multiple deficits of the past, Tibet is now progressing towards those laws doing their work. The State Council's 2013 White Paper, *The Development and Progress of Tibet*, names the universal laws and rules which China is following: *"The founding of the People's Republic of China in 1949 marked Tibet's entry into modern civilization. The development and progress in Tibet is in accord with the rules for the development of human society, and reflects the mutual aspirations of the people of all ethnic groups in Tibet. It is the natural result of the overall development and progress of China as a whole. The development and progress of Tibet mirrors the victory of human society's enterprising spirit and creativity in the quest for justice and happiness, and has proved the inevitability of history. The development and progress in modern Tibet results from the innate logic of its social and historical environment, and has its roots in China's progress in a larger context. Its development is in line with the advance of world's modern civilization.*

"The development and progress of Tibet is in accordance with the rules for the development of human society. From traditional agriculture and animal husbandry to a modern market economy, from the integration of political and religious powers to their separation, from autocracy to democracy, superstition to science, and isolation to openness - these are the generic laws for the development of human society.

"Over the past 60 years of its development, Tibet has unfailingly followed these rules and the general trend. Observed from the macro perspective of human history, Tibet has leapt from a feudal serfdom society into one with a modern civilization within a matter of only a few decades, creating an outstanding example of regional modernization.

"Over the past 60-odd years, Tibet has finished a course of historical journey that would normally take several centuries or even a millennium for the human society to complete. It has written a spectacular chapter in the history of mankind."[105] These laws and rules, inevitable trajectories, outcomes, and universally applicable destinations are reifications of the great story China has told itself ever since Mao created the narrative of past humiliations, present standing up and future realisation of the China dream.[106] Throughout this discourse of the inevitable triumph of human will, a yardstick of unending lethargy, failure, weakness, stagnation and subservience to nature has been needed; and Tibet has served that purpose.

104 Gabriel Lafitte, Learning to Consume Tibet, in Alison Hulme ed., The Changing Landscape of China's Consumerism, Chandos, 2013 http://rukor.org/inventing-mass-chinese-tourism-to-tibet/

105 State Council, Development and Progress of Tibet, http://news.xinhuanet.com/english/china/2013-10/22/c_132819442.htm

106 David E. Apter and Tony Saich, Revolutionary Discourse in Mao's Republic, Harvard, 1998

If China were merely to say it has applied to Tibet the same economic conventions it applied to its own growth, of concentrating investment where factor endowments are greatest, making greatest use of comparative advantage, establishing infrastructure and commodity supply chains, that is not dramatic enough, nor sufficiently teleological. A glorious destiny awaits all those who recognise "the rules for the development of human society" which China, in Tibet, has helped along, expediting their ultimate realisation in the depopulation of the countryside and the concentration of the population in cities. The civilising mission is nearing completion. We will know when it is fully realised, since the universal laws of development define success as a high level of urbanisation.

Can Tibet ever reach this predetermined salvation from its darkness, ignorance, isolation and stagnation, all key descriptors China attaches to Tibet? Can Tibet ever catch up, and become as advanced and civilised, as high in human quality (*suzhi*) as China, especially the exemplary peak of civilisation, the membership of the Communist Party?

In recent years, as the pain of the Tibetans manifests in protests and public suicides, Chinese attitudes have become more overtly disdainful, racist and even hateful towards Tibetans. While Tibet progresses "in leaps and bounds", again a frequently used official phrase, to do away with its primitive nomadic past, China's ambivalence grows. On one hand, there is an endless production of glossy upmarket travel magazines, documentaries and premium-priced consumer products featuring Tibet as a pure land of mysterious magic and pristine scenic spots. On the other hand, Tibetans are depicted as obstinately clinging to the past, ungrateful for the largesse China has bestowed on them, harbouring a murderous intent towards all Han. Perhaps the need for an orientalised other is so great, and so ingrained, that Tibetans can never become the equals of the Han.

China's rhetoric is of inclusion; including Tibet in China's progress, ensuring Tibet is included in the universal application of universal rules. Yet on the ground the result is exclusion. Not only are Tibetans routinely excluded from Han Chinese society, Tibetans are increasingly excluded from their own pasture lands, required to live elsewhere on peri-urban fringes, in the straight lines of modernity. Exclusion has become a defining feature of the Tibetan experience.

Exclusion is central to China's success. The deeply institutionalised distinction between people classified by birth as rural, from those entitled to all the privileges of permanent residence in cities, has created a huge factory workforce that has only temporary rights to stay in cities as long as they are employed. China's global success as the world's factory was for decades based on an endless supply of cheap labour, supplied by rural migrants who were not allowed to migrate permanently to the cities, whose children could not be educated in urban schools, who had no urban health insurance and who could be deported back to their registered rural address at any time. Exclusion is nothing new to China.

IS VALUE-ADDING THE SOLUTION?

What is striking is the failure of Tibetan uniqueness -wool and milk, barley and carpets, scenic spots and sacred mountains, blue poppies and medicinal herbs- to capitalise on existing strengths, attract investment and thereby link to the wider national economy. Such projects typically are too small and local for central planners to focus on, especially in a system of governing over one billion people by slogans meant to apply equally to all. Even when the Department of Foreign Trade and Economic Cooperation of the Tibet regional government listed 150 such investment opportunities, in 2002, in the hope of attracting foreign direct investment, nothing much happened.[107]

These projects failed to attract funding from private investors who understood they would never have control, or from the state-owned banks which give preference to big projects that are listed in central Five-Year Plans. In the

107 Department of Foreign Trade and Economic Cooperation of the Tibet Autonomous Region, Investment Guide of Tibet Autonomous Region, 2002, 105 pages

absence of fine-grained bottom-up projects to add value to local comparative advantage, and in the absence of Han settlers, especially in rural Tibet, the party-state found few ways of making a Tibet with Chinese characteristics. For want of any alternative, the state remained in a holding pattern, pouring capital expenditure into major infrastructure projects to create the preconditions for modernity. These big projects were all about enclaves and corridors, hubs and spokes, connecting the west of China to Tibet through highways, pipelines, railways, power lines, optical fibre cabling. They could be designed by engineers far from Tibet, based on data collected by the militarised first wave of surveyors and road builders in the 1950s and 1960s. During the construction phase they brought tens of thousands of Han Chinese workers to Tibet, but usually this labour force left once the jobs ran out.

It is tempting to call this a failure of the imagination, a failure to consider anything but the standard, centuries-old process of populating new lands with Han settlers. But if it is a failure, it is strictly a state failure, not a widespread popular failure, as most Han just wanted to make a living, or even get rich, with little interest in nation-building ideologies. It is by now a failure that is no longer failing. The decades of investment in infrastructure, in transport corridors, extraction enclaves and urban hubs are at last generating the economic take-off the state has always sought. Han Chinese are finding opportunity as never before in Tibet to make money, and stay as long as it takes to accumulate significant wealth.

However, those several decades in which the central party-state did little beyond construction of enclaves and corridors, have cost the land and the people of Tibet dearly. The neglect and almost invisibility of areas and communities not included in enclaves and corridors of modernity resulted not only in stagnation but degradation. Land degradation was the legacy of past failures caused by breaking the steppes with ploughs and planting cropsill-suited to the frigid climate. Revolutionary zeal for intensifying livestock production often required communised herders to build fences out of sod, clod piled on clod, in the absence of sufficient finance for even wire fencing materials. The upturned earthen fences, running pointlessly up and downhill in the straight lines of the trigonometrical surveyor, can still be found in many areas, long abandoned, but highly visible due to the erosion they set off, exposing bare earth to scouring gales and blizzards that can quickly strip soil back to rock.

This is the untold story no-one dares talk about, of the hubris of Han cadres sent to the grasslands, confident they could scientifically make the pastures yield more, beginning with imposing straight lines on the landscape. Tibetans old enough to remember the compulsory labour required in the 1960s and 1970s recall all too well the futile efforts fence the herds, to divide them by gender and age, the idea being to breed superior qualities into the yaks, sheep and goats of the uplands. They remember how many Tibetans died pointlessly during the forced labour, digging and building fences from nowhere to nowhere, soon abandoned. But what Tibetans say, or whisper, to each other cannot be said to others, as that risks, even now, being accused of revealing state secrets, and disloyalty to the party, both serious crimes.

STRENGTHENING THE TRADITIONAL PASTORAL ECONOMY: WOOL

Prospects with potential to engage the entire Tibetan economy in accessing modern urban Chinese markets, also failed to get off the ground.

A major consequence of decades of neglect is that the comparative advantages of the Tibetan Plateau are no longer advantages. Even as urban China has in recent decades developed a hunger for dairy products, hardly any Tibetan dairy finds its way to urban consumers who pay premium prices for yoghurt, infant formula, ice cream and other dairy goods, whether made in China, New Zealand or elsewhere worldwide. The failure of Tibetan wool, especially its high value semi-fine wool, to find a market at a time when China has become the world's factory for woollen cloth making, is an even greater failure.

It was in the 1980s, as China reformed and opened to the world, that the wool production of Tibet's pastoral economy, had its best chance of integration into China's woollen mill industry on the east coast. The 1980s was the decade of encouraging rural areas to become rich, by establishing rural industries, known as Town and Village Enterprises (TVEs), to add value to local products, and make greater profits by processing raw materials into something attracting higher prices. At the time, the *hukou* household registration scheme preventing rural people from migrating permanently to the cities was strongly enforced, so the TVE concept was the best opportunity to bring industry to the countryside, rather than rural folk migrating to the cities. All over China TVEs flourished, and remain a major category of industrial production, except in Tibet. To this day, official statistics on TVE production publish tables filled with numbers, except for one blank line, for Tibet.[108]

TVEs were actually established in Tibet, usually by county or township cadres, recognising the opportunity to take the raw, greasy, unwashed and unsorted wool shorn from Tibetan sheep, goats and yaks, and turn it into clean, graded wools, much of it semi-fine and suitable for use in the woollen mills, for high end fabrics, including cashmere, as well as the coarser wools for felt-making and other applications.

However, the TVEs all failed, and went out of business, ending any opportunity for Tibet's pastoralists to benefit from integration into a much bigger and fast modernising economy. The reason they failed is because of the greed of the cadres who used public money to build them, for their private profit, and built them too big. According to the agricultural economists who studied this collapse in detail, the local governments, in their keenness to seize this exceptional opportunity to get rich, built wool scouring plants capable of processing more than the locally available supply. So much capital had been sunk in construction, they were under pressure to service debts and increase supply by competing furiously with each other to attract as much as possible of the marketable wool surpluses produced by the nomads. Prices rose, further squeezing the TVEs margins.[109]

Then they made their fatal mistake, not realising that the woollen mills in Shanghai had other options, both by switching to synthetics, and by importing wool, notably from Australia. The TVEs, whose business model was the production of clean, graded and sorted wool, took to deliberately adulterating their end product with stones heavy enough to add to the weight of a weighed wool bale, thus increasing the price paid by the woollen mills. Not surprisingly, the woollen mills soon tired of having to prevent stones from getting into their machinery, and dropped the TVEs as suppliers, which then went broke. Thus ended the best opportunity Tibet's pastoralists ever had to benefit from integration into a national Chinese economy fast becoming a world player in the production of woollen cloth.[110]

Today China is the leading producer of woollen cloth, and the wool of the Tibetans is designated as suitable only for low-end uses, mostly for being beaten into felt. The front cover of a 2008 textbook, *Modernising China's Industries: Lessons from Wool and Wool Textiles*, shows the fate of Tibetan wool. On the cover is a uniformed, gum-booted Chinese worker, with a long handled pitchfork handling raw fleeces piled into a tractor-pulled agricultural trailer. There is also wool on the ground, and in the background bare wintry trees. At first sight, it seems the worker is forking wool, a precious commodity that should not get dirty, off the ground and into the trailer. But, as the text explains, with another photo, the worker is forking the wool *off* the trailer and *onto* the muddy ground, in a field on the outskirts of Beijing, because that is where Tibet's wool is now sold and bought, at low prices.

The text says: *"The outside storage on dirt and rudimentary grading of the wool limits it to lower-value markets. Nonetheless, a large proportion of China's coarse and semi-fine wool ends up at these markets."*[111]

Tibet's pastoralists are the losers and, as the World Bank says: "*herders have had no proper incentive to present*

108 Agriculture Statistical Yearbook 2013, 144-151

109 Christopher Findlay, Challenges of Economic Reform and Industrial Growth: China's Wool War, Allen &Unwin, 1992

110 Gabriel Lafitte, New Thinking On Poverty Alleviation In Far Western Upland Areas Of China, Paper Presented To Western China Poverty Alleviation Conference sponsored by China's State Council, Chengdu, Sichuan, August 2006

111 Colin G. Brown, Scott A. Waldron and John W. Longworth, Modernizing China's Industries: Lessons from Wool and Wool Textiles, Elgar, 2008, 18

the product for sale correctly. Therefore, the incentives faced by herders needs to be made the central focus of fine wool activities. Wool of medium fineness (23-25 microns), is often referred to in China as 'unsellable', but in fact makes up a large proportion of Chinese wool imports. Similarly, China has a well-established carpet industry that needs supplies of white strong (27-40 micron) wools: several Chinese breeds can and do produce such wools, for which prices are currently very low….. The current wool prices received by herders are so far below national and international levels (adjusted for transport and quality considerations) due to the shearing, grading and baling practices."[112]

STRENGTHENING THE TRADITIONAL PASTORAL ECONOMY: DAIRY

There is still a possibility that whole milk from Tibet, packaged for long life by a Chinese company favoured by a state that plays favourites, may yet establish a significant market among the hipsters of newly wealthy urban China. Tibetan wool is well past any such opening, and is consigned to the lowest category of coarsest wool fit only for felt making. The window of opportunity has long closed.

The failures of these two key surplus commodities abundant across the Tibetan Plateau are a sad story seldom told, since it fits neither the Shangri-La romanticism of the west, nor the discourse of Tibetan backwardness prevalent in China. Even when the rights of Tibetans are the focus, little attention is paid to the right to development.

In any other context, development agencies seeking to enlarge income generating opportunities would turn first to what the locals do best, to see if value can be added, and production scaled up. This is development economics 101.

In a neoliberal economy, dominated by a few big corporations, late entrants to the market face major hurdles. It is not an option to start small and gradually build up, growing organically through retained profits. A new entrant to a milk market that is already nationwide has to be able to distribute product nationally, from the outset, to gain market share and establish a brand. This requires a big capital investment from the start, in a system where loans are given only to the well-favoured who have good connections, and the support of central leaders. The chances of a Tibetan enterprise breaking into China's booming dairy market are now very slim; if there was a window of opportunity, it seems to have passed. China's financial media continue to report that central leaders are still picking winners, choosing which of the biggest dairy companies will be favoured by statist interventions. Caixin reported that: *"The government in general wants to strengthen the Chinese dairy industry's reputation and fend off competition from companies in Australia, Germany and other countries that have been grabbing market share since 2008. It appears further consolidation is among the government's latest goals. Some industry watchers say Beijing is backing only the country's largest, state-run dairies. But some government officials say they want to lift the industry as a whole without playing favourites. Domestic media reported in mid-September that the Ministry of Industry and Information technology (MIIT) had picked five dairies to receive government subsidies worth a combined 30 billion yuan. The companies – Inner Mongolia Yili Industrial Group, China Mengniu Dairy Co., Heilongjiang Wondersun Dairy Co., Feihe International Inc. and* Treasure of Plateau *Yak Dairy Co. – were also reportedly offered special credit access. The reports triggered disputes over whether the government should give preferential treatment to a "national team" of dairy firms at the expense of smaller players. Industry players have continued debating whether the government should build and finance a champion team. The five dairies named in the media report applauded the team approach, while other companies complained about its likely effect on competition and fears of disputes with countries that sell dairy products in China over what could be seen as trade protectionism.*

"Even while the debates were continuing, MIIT on October 18 handed the State Council a five-point plan outlining future government support for dairy industry consolidation. The government, it said, should provide subsidies, credit

112 World Bank, *Gansu and Xinjiang Pastoral Development Project Appraisal Document,* Report #25703-CHA, 2003, 23, 42, 44

and land. To achieve the goals of better and better-selling dairy products for children, the government has proposed dairy company consolidation and restructurings, as well as stricter oversight and management for the entire industry. Moreover, MIIT is one of nine government agencies that this year issued new quality control guidelines for dairy companies. Among high-end baby formula brands, Gao said, foreign companies control more than 75 percent of sales. The government wants to cut that portion to 30 percent by 2015 by building the 10-company team, which could enjoy combined annual sales of 2 billion yuan. MIIT finds itself in an awkward predicament. The ministry spent three months on a list (of big companies worthy of swallowing smaller rivals) but can't publicly admit to supporting the idea of a national team, as it should support market behaviour.

"A dairy company source who participated in the selection process said the ministry's membership criteria involved production scale, capitalization, whether or not the candidate owned dairy farms, and quality control. Wang Weimin, secretary-general of Xi'an Dairy Industry Association, said some small companies in his area have been complaining about the ability of their larger rivals to influence government officials and force the policy support decisions. The government's moves are clashing with the market, Wang said, and follow successful efforts by small and medium-sized companies to build consumer trust. MIIT's policy will hurt companies with sound reputations, he said, by turning consumers toward the biggest players.

"Caixin has learned that MIIT's industry consolidation plan – which covers government subsidies, preferential credit access and land-use provisions – is now being considered by the State Council. And MIIT's effort to promote consolidation still faces major challenges, said a dairy industry investor. 'It's difficult for the government to approve a subsidy policy in a market economy,' he said. 'And if the government wants to provide support, where would it get the money?'"[113]

These are the contradictions and confusions of corporate China today, and of a government drawn to revert to its dirigiste habits, yet also committed to letting enterprises and market forces dominate. To say the least, any successful new entrant to this market would need friends in the party-state apparatus, at all levels, from prefecture to province to the national government, if only to have advance notice of statist interventions by a developmentalist state favouring rivals.

Yet in the list of favoured companies is one fairly new entrant, whose brand draws heavily on the perception of innate purity of Tibet. Among the companies likeliest to receive subsidies is the oddly-named ***Treasure of Plateau*** *Yak Dairy Co*., which would be as odd for English speakers if it were called the *Bull's Milk Corporation*. To Tibetans this is hilarious. Nonetheless ***Treasure of Plateau*** is rapidly finding a place in the national milk market, and at the premium priced end, by heavily promoting its milk as Tibetan and thus pure, utterly untainted by the recent scandals of toxic adulterations. It is true that ***Treasure of Plateau*** milk is sourced from Tibetan herd owners, in all the five provinces where Tibetan *dzo* live and yield their milk. This gives ***Treasure of Plateau*** the active support of five provinces, covering most of western China, plus subsidies, as ***Treasure of Plateau*** takes over state-initiated small-scale pilot projects to marketise milk from Tibetan pastoral areas. What ***Treasure of Plateau*** adds to these scattered state projects is a strong focus on brand building, with upmarket product placement, predicated on the unique selling proposition that milk from Tibet is by definition exceptionally pure, safe and nutritious, ideal for aspirational parents of single urban babies destined to be outperformers when adult.

In order to achieve market share, in the top price bracket, ***Treasure of Plateau*** spends big on brand building, and pays very little of its high retail price to the Tibetan producers, who have no say in the corporation, and are treated purely as contract suppliers of raw inputs, to be disciplined by a company that is guarantor of purity. In no way is ***Treasure of Plateau*** a Tibetan enterprise, nor do its Tibetan suppliers of "yak" milk (which is equivalent in English to saying "bull milk") get paid more than a tiny proportion of the premium price paid by anxious urban consumers who want nothing but the best for their precious one child.

113 Qu Yunxu, He Chunmei, and Huo Bingyi; China's Dairy Market Policies Clear as Milk: The scandal-rocked dairy industry is changing, but the government's goals remain uncertain, Caixin 23 Oct 2014

The rise of *Treasure of Plateau* Corporation is indicative of what rural China means for urban consumers, and how corporations in neoliberal China can leverage popular perceptions of remote pastures into a modest production base for immodest profits. Part of the business model of *Treasure of Plateau* is to maximise profit by doing little to develop a milk industry, instead taking over the pilot dairy supply stations established in several areas of the Tibetan Plateau, in all five provinces of the plateau, as token demonstrations of the potential of Tibetan dairy products to link into the burgeoning urban market. The pathway for entrepreneurs to acquire state assets, at bargain prices, using insider connections, is well documented, in many industries. This appropriation of state assets provides the company with the essential producer goods, or raw industrial 9nputs, at little cost, and with little effort in creating an industrial production line.

CHINA'S PRO-FARMER SUBSIDIES

That is not the end of the special privileges available. Ever since rural discontent all over China peaked in 2006, substantial subsidies have become available to farmers, which, as in other countries, mostly go to the bigger corporate producers, including *Treasure of Plateau*. It was in 2006, in response to years of protest by farmers at loss of land to urban development, heavy taxation by local governments desperate for revenue to meet their mandatory obligations, and little progress in reducing rural poverty, that China's central leaders announced a major policy shift. In 2006 China announced a new pro-farmer policy, popularly known as the *san nong*, or three rurals, meaning agriculture, rural areas and farmers. The new policy announced not only a lifting of the burden of taxation from the peasant farmers, but also subsidies on farm product prices, as a way of raising farmer incomes without making urban life so costly that urban unrest would then occur. This juggle between rural and urban, with governments trying to appease both constituencies, is common throughout the developing world, sometimes resulting in a major portion of the national budget being allocated to subsidising food prices.

From the outset, this policy, as its naming of the three core elements of arable, crop sowing China suggests, was restricted to agriculture, arable land and the peasant farmers who remain on the land, even when their able bodied adult children have migrated to the towns for factory work, leaving the elderly and the grandchildren behind. From the start, this *san nong* policy only vaguely included the pastoralists of the "waste" lands, on the peripheries.

Yet well-connected businesses could monetise the nominal inclusion of the pastoral regions, especially if, as is the case with *Treasure of Plateau*, the value they add has little to do with actual product, still less to do with scaling up production, but everything to do with brand building. This is what *Treasure of Plateau* excels at, and brand awareness is what urban living centres on. *Treasure of Plateau* was able to monetise the anxieties of urban middle class mothers wanting nothing but the best for their only baby. As well as its' corporate pitch to parents, *Treasure of Plateau*'s other audience is the party-state, and its deep fixation on picking winners. The ambivalence of a party-state that says private enterprise should play the dominant role in the economy, but also has entrenched habits of playing favourites, decreeing mergers and acquisitions, and rewarding those attuned to the mass campaign slogans of the moment.

A shrewdly run corporation can not only attract *san nong* subsidy money, but position itself as a national champion, a company big enough to take on the world; or with special potential to be bulked up, agglomerated through mergers and acquisitions into a market leader and national champion. The party-state remains committed to orchestrating the rise of national champions. In the dairy industry, the rise in urban demand for fashionable yoghurt health drinks, infant formula, ice cream and other dairy products has far exceeded domestic supply, resulting in massive imports from New Zealand and other dairying economies. This reliance on imports gives those ministries traditionally inclined to pick favourites an argument for creating new national champions capable of scaling up domestic production, thus reducing embarrassing and expensive dependence on imports.

Thus *Treasure of Plateau* sells only modest amounts of actual milk, but makes money several ways:

- By paying producers as little as possible
- By monetising middle class anxiety about the safety of dairy products, especially infant formula
- By attracting official subsidies
- By positioning itself as a national champion in the making, eligible for special favourable treatment

If *Treasure of Plateau* succeeds in becoming a big brand, it will add value to the products of Tibetan pastoralists, but only for a few.

Nomads on the move, Tibet, 2013

Chapter Four:
Hearing Nomad Voices: Looking At The Pastures, Looking At China Through Nomadic Eyes

Thanks to the efforts of Chinese scientists and their international colleagues, there is now far more information in print about what happens inside the earth in Tibet, than what happens on it. Geology has been a major focus of Chinese scientific research, literally putting Tibet on the map, available for scrutiny by scientists worldwide. But the gap in social knowledge, or genuine cross-cultural encounter, identified by a delegation of American grassland scientists 25 years ago, in 1990 has not been rectified.[114] There are still few Chinese social scientists in the grasslands, listening to nomad voices. This skews China's knowledge heavily towards what is measurable as data of the physical and biological sciences. Well into the 21st century the extent to which nomadic life and land management have been studied and written about in China remains fragmentary and minimal.

What is missing, and where might we find it? Chinese scientists show little curiosity to understand the grasslands through the eyes of those who know it most intimately, and China allows very few international social scientists to independently investigate the nomadic understanding of the grasslands.

If we learn to listen to what Tibetan pastoralists can tell us, we discover not only a way of life that worked, sustainably, for thousands of years, despite the highly risky environment, but also testimony of the slide into poverty in recent years.

FINDING NOMAD VOICES

China has always looked at the nomadic pastoralism of Tibet as, at best, a way of life forced on people by cruel circumstances, a version of ecological determinism in which the cold of Tibet left no choice but to wander with the animals, always seeking grass. The pastoral life seemed, from afar, to be almost an animal-like existence, following the beasts without any control, or mastery of nature. To China, civilisation begins by penning animals, cutting fodder, and feeding them.

However, for Tibetans the seasonal fanning out of the people each spring and summer resulted in a light human use of the entire landscape below the snowline. Only the mountain peaks and the lakes, both sacred, the abodes respectively of gods and goddesses, were off-limits.

The pastoral nomads of the Tibetan Plateau, although often illiterate, have always had a deep understanding of grassland dynamics and their place in it. This is seldom expressed, especially not in English, as the voices of the nomads are seldom heard. But gradually more nomad voices reach us, and we get to see for ourselves how deeply they care for wildlife, biodiversity and sustainability.

Here is the voice of Tador (Tashi Dorje), in 2006, an educated Tibetan cadre official and environmentalist who grew up in what is now the Sanjiangyuan National nature reserve (SNNR) human exclusion and depopulation zone: *"The fact that indigenous Tibetans survive in the third pole, generation after generation, demonstrates that our culture*

114 National Research Council, Grasslands and Grassland Sciences in Northern China, National Academy Press, 1992

and nature are harmonious. Otherwise we Tibetans would have vanished long ago. Today in China, environmental protection is something learned from the West. An example is to build nature reserves by removing the inhabitants. We Tibetans are not like this. Where there are inhabitants, the environment is well-protected. Where there are no Tibetans, like in Kekexili (Chumarleb), Tibetan antelopes were killed en masse. We have to deploy Tibetan culture to protect nature, but not to the exclusion of contemporary conservation methods. We need government laws and enforcement with Tibetan culture as the foundation. The government's method of protection is to establish bureaus and send police to relocate people. Our wish is to establish nature reserves inside Tibetan areas, to let Tibetans and not police protect the environment."[115]

Tador's words suggest a more inclusive way of appreciating the land, rivers, wildlife and livestock production as an interconnected whole, to be skilfully managed by intimate knowledge of the land and its limits, flexibility, mobility and decisiveness. Tador's words come to us via one of the very few Han Chinese who has been immersed in Tibetan life, the investigative reporter Liu Jianqiang,[116] who worked for years on Southern Weekend, then moved to China Dialogue www.chinadialogue.net Liu Jianqiang is a research associate of the Peking University Centre for Nature and Society and Visiting Scholar at UC. Berkeley. He also serves as columnist and associate editor for www.chinadialogue.net[117]

Liu was formerly a senior investigative reporter at *Southern Weekend*, China's most influential investigative newspaper, where he provided front-line and in-depth coverage of China's burgeoning environmental movement. Some of Liu's most influential articles include his 2004 expose on the controversial Tiger Leaping Gorge dams in Yunnan province. The story was personally read by Prime Minister Wen Jiabao, who then ordered the project to be suspended pending a central government investigation. Liu's 2005 article on the Summer Palace lake reconstruction resulted in the State Environmental Protection Administration holding China's first state-level public environmental hearing.

Liu was a 2005 nominee for the State Environmental Protection Administration's "China Environmental Protection Person of the Year" award. He received the SOPA 2008 Award for Excellence in Reporting on the Environment from the Society of Publishers in Asia, as well as the TNC-SEE Award for Environmental Reporting in 2009.

Liu is the author of *King of Zi: Tibetan Environmentalists in China*, published in Chinese in Hong Kong and in Mainland China in 2009, and a book on rafting on the Jinsha River near the Tiger Leaping Gorge, published in 2010. An English translation is due soon.

Tador's vision of a future in which Tibetan pastoralists, wildlife and biodiverse pastures all co-exist, to mutual benefit, is more comprehensive and inclusive than the official model, be it focused exclusively on meat or water for distant consumers. Tador's life story is told in detail, as the reader follows his career putting into practice this holistic approach, despite many obstacles; and the life story of his mentors, the brothers Karma Samdrup who remains today in goal for his advocacy for the environment, and Rinchen Samdrup , released from prison in 2014 after five years in prison. [118]

Why is Tador so confident Tibetans can manage protected areas and national parks within the lifespaces of the Tibetan communities? Tador was directly involved in protecting the endangered Tibetan *chiru* gazelle from being hunted down by poachers, in some of the least accessible areas of Tibet, and knows from experience what it takes to risk your life to protect wild animals from being gunned down.

He also has behind him the whole of Tibetan culture, and its attitude to the land, not as a sentimental object of

115 Liu Jianqiang, King of Zi: Tibetan Environmentalists in China, Lexington Books, forthcoming 2015
116 http://en.wikipedia.org/wiki/Liu_Jianqiang
117 https://www.chinadialogue.net/blog/6937-China-s-new-environmental-law-looks-good-on-paper/en
118 http://sinosphere.blogs.nytimes.com/2014/08/13/tibetan-environmentalist-is-freed-from-prison. http://highpeakspureearth.com/2010/going-home-by-dolkar-tso/

romance, nor a utilitarian calculus of human usefulness. Modern society seems to know only those two modes: either what can we get from nature, or how can we put nature on a pedestal, much admired but still distant. Not so the Tibetans. Nature is revered, as archetypal wilderness, the ultimate other, highly desirable yet unattainable, since the human is seen as inherently polluting.

Tador and his many Tibetan environmentalist friends do not suffer from this dualistic split dividing the human and the natural. He inherits thousands of years of accumulated, embodied knowledge of managing land, curating whole landscapes, partaking of the bounty provided by natural cycles, cutting certain trees while worshipping others, hunting wild animals occasionally and repenting by making offerings of slabs of butter to the deities of the mountain peaks and lake depths, whose blessings have the power to cancel accumulated negative karma, if the mind of the one who prays is resolute in vowing to refrain from negativity in future. Land, mountains, rivers, skies and people are all mixed together, sharing similar fates, on differing yet colliding trajectories.

We can turn directly to Tibetan sources, if we know where to look. When we open ourselves to the reasons and circumstances that lead Tibetans to write about the *drogpa* nomads, we find depictions of *drogpa* life are to be found not only in Tibetan postgraduate dissertations but also in pilgrimage guides, sacred biographies, monastic records, historical annals and devotional texts. We can look at official decrees, and sermons of lamas. All these are a window into indigenous knowledge, not arranged systematically, according to scientific categories. These texts, some old, some recent, come to us because they were written or recorded for reasons that have little to do with academic uploading of objective data.

Decrees issued by the Tibetan government in Lhasa frequently urged the populace to refrain from meat eating, from hunting and from butchering herd animals at specified times, sometimes on set days each month, or for a whole month.[119] What is striking about these decrees (*tsatsig*) is that they tread the fine line between popular needs for nutrition, also popular livelihoods in nomadic areas, on one hand, and a Buddhist belief that life should be taken only when there is no alternative, on the other. These *tsatsig* emphasise that it is good for the health of the people to refrain from slaughtering, butchering or eating meat; it is healthful for those who undertake restraint, as well as being beneficial to the lifespan of the animals. This is no trivial point. Throughout the Buddhist teachings, self and others are equalised, given the same ontological and existential status. Self is no longer privileged over other, whether the others are other humans or other breathing creatures. All sentient beings are equally deserving. This inclusiveness excludes no-one, nor does it exclude the self.

In modernity, we tend to perpetuate a dualism that probably has its origins in Christianity, of selfless altruism versus selfish greed. The individual may choose one or the other, but it is not often that it seems both can be practiced. But from a Buddhist point of view compassion for others does not exclude compassion for the self; and many Buddhist teachers explicitly say effective and sustained compassion for others is possible only if one treats the self gently, confidently and compassionately from the beginning. So the best policy –social, ecological or personal- is that which benefits both self and other.

This gave the lamas great scope to declare that practices of biodiversity conservation were good for the health of individuals, would prevent disease or feuding and war. Since nomads are sometimes quarrelsome over pasture, such words are needed and heeded, as ways of ending the cycle of feud over access to pasture, usually against herders whose allegiance is to a different lama or monastery.

The language of the *tsatsig* very seldom uses categories familiar to modern conservationists, such as maintaining gene pools, biodiversity, habitats, biomes or ecosystems. Instead they tell the listener, as the *tsatsig* is ceremonially read out, that those who obey will accrue good karma, gaining merit which will be useful in one's next lifetime, if not before, because karma means as you sow, so shall you reap.

119 Tenzin P Atisha, *Tibetan approach to ecology*, paper presented to *Tibet: then and now* conference, Maitripa Contemplative Centre, Healesville, Australia April 2005

Nomads hold prayers at a mountaintop ***latse****, Tibet, 2012*

Tsatsig that did enjoin nomads and farmers to protect wildlife sometimes used images that suggest keen observation, and perhaps an excessive concern to protect. In far western upper Tibet, for example, on the arid alpine desert north of Ngari the local authority (the *garpon*) decreed that people be sent to look after the *zhi* antelopes (*pantholopshodgsoni*, commonly called *chiru*) in June and July, when the females give birth, because the young are for a while blind and defenceless, both against wolves and hunters. George Schaller, director of Science for the New York based Wildlife Conservation Society, makes no mention of blind baby *chiru*, despite having led several expeditions to track the calving of *chiru*.[120]

Similarly, in the sacred lake of the goddess at Manasarovar, also in the far west, people were urged to protect fish from the turbulent wind-whipped waters of autumn, and from the flocks of migrating waders headed south, having left their Siberian summer breeding grounds.

The grasslands of the Tibetan Plateau have always been the engine of Tibetan civilisation. Ever since the first Tibetans arrived, around 9000 years ago,[121] from the west, and discovered the vast expanse of sward, Tibetan culture has been based on the grassland.

This is most obviously so in the products of the rangeland economy, gathered each year from what nature provides, the summer and autumn bounty of milk, butter, yoghurt, cheese, wool, skins, meat; all that is needful to sustain life and have a huge surplus to sustain the sciences of mind practiced in the monasteries and by scattered yogis. The great surpluses of wool and dairy products were traded locally for the grain grown in sheltered valleys by farmers, and over great distances to China and India. The abundance of wool and dairy, offered to monasteries to which local nomadic communities had intense loyalty, fed their monk sons and many more, even giving the monasteries sufficient to trade.

But it is not only the material basis of the nomadic mode of production that sustained a civilisation that seldom saw much need to build towns or roads, but did invest heavily in the sciences of mind that transform what it means to be human, overcoming all negativities and thereby creating, in each generation anew, trusted leaders who could be relied on to never succumb to partiality or factionalism. No society is perfect, and Tibet had plenty of squabbles and feuds, but the saints, the great lamas and the wandering yogi *ngagpa*, living among the nomad encampments and farming villages, could always show by example a way to live that is not driven by hope and fear, like and dislike.

Tibet was a nomadic civilisation, not by necessity but by choice, a mobile civilisation in which mobility was the norm for everyone, not just the herders. The life stories of the great meditators are full of lengthy and arduous pilgrimages, of travelling far to find a suitable teacher, and of lengthy retreats beyond even the remotest pasture, in the mountain caves above.

Every Tibetan would hope to make a pilgrimage to Lhasa at least once in their lifetime, even if that meant being on the road for months.

To live where the horizon is framed by mountains, or even in a valley surrounded by mountains, is to live in an amphitheatre in which the mind's concerns are reflected in rock, in the stark shapes of the peaks and the features of landscapes thrust into the sky. The human and the non-human mirror and exemplify each other. When a particular bird flies overhead, it is a reminder, a wake-up to remember what matters. If a rocky outcrop seems to take the shape of a saint, or an elephant, or an eagle, it is a reminder to awaken, not take obsessions and preoccupations too seriously, to recall that there is a life of the mind that plunges deep below the surface chatter to realise that subject and object are of the same nature. To see a saint, or his handprint or footprint in a rock brings an indulgent smile to the modern mind, at the credulous foolishness of the premodern superstitious mind. Or it elicits a sneer, at the green-brained yokel captive to his own projections. Modernity can explain it all away. Modernity thereby loses much that, to Tibetan minds, is practically conducive to awakening.

120 George B. Schaller, *Wildlife of the Tibetan steppe*, University of Chicago Press, 1998

121 Georg Miehe, Sabine Miehe, Knut Kaiser, Christoph Reudenbach, Lena Behrendes, La Duo and Frank Schlütz; How old is pastoralism in Tibet? An ecological approach to the making of a Tibetan landscape; Palaeogeography, Palaeoclimatology, Palaeoecology 276 (2009) 130–147

TIBETAN PASTORALISTS KNOW EACH PASTURE BY ITS' NAME

For devout Tibetans, to lift one's gaze up and up and up, as one can before a Himalayan mountain, is to be reminded, in outline, of the key points of a memorised text that points to awakening to the nature of reality. It prompts remembrance of that which is wholesome and meaningful: an image, a yogic practice, an opportunity to cleanse the mind of its mundane and endlessly repetitive obsessions and agendas. To gaze into the landscape is to be gazed upon, by saints and adepts and gods who can be invoked to come, to sit above one's head, to enter one's heart, to suffuse one's body and mind with radiant power and compassion, whose immeasurable qualities merge into one.

In the texts, all of these practices are carefully cultivated, defined by technical terms that strive to be as precise as possible for practitioners of the Tibetan sciences of mind. The modern gaze that dismisses sees a saint in the rock as just a fanciful resemblance, a whimsical and fleeting likeness, or just a delusion, misses the opportunity for *communitas* and transcendence of the narrowly constituted self.

An intimacy with landscape is a result, not only the dramatic mountainscapes that bisect the Tibetan Plateau as well as surrounding it, but also the rolling green of the pastures. Gillian Tan notes: *"Nomads with whom I have lived and worked with refer to their pastures by name. Taraka, Kuchin Ngunbu: these are all localized areas, without definite boundaries, yet clearly lineated in their minds because the places have distinct meanings, topographical landmarks, oral histories and personal as well as communal interactions. Nomads will send their animals to graze in Kuchin Ngunbu over the summer. Its name means, a covering of blue, perhaps alluding to the blue wildflowers that cover this particular area of pastures in that season. Taraka is another pasture with an oral history that is linked to the horse of Ling Gesar, warrior king of Eastern Tibet. The horse itself is believed to be an incarnation of a deity that is sent to aid Gesar in his adventures against ogresses and monsters. What this suggests is that, far from being a homogeneous mass, an expanse of undifferentiated land for which one portion is synonymous with another, the vast pastures are heterogeneous places that are as varied in meanings and histories as the suburbs of Melbourne or New York.*

"Stones on the Tibetan grasslands are said to have gender, with round smooth stones being feminine and rough jagged stones being masculine. These stones are then given different practical uses in everyday life. As well, the attributes of gender invoke certain characteristics that reveal the imaginative dimension of nomads: feminine stones are nurturing, these are used around the stove, they protect and enhance. Masculine stones are powerful, they are jagged and used to penetrate or cut – entailing a threat to the circle of life. Rivers and lakes are said to be the residences of guardian water beings, known as Lu, or Naga in Sanskrit. They are portrayed and described as serpentine beings that protect the life-giving waters of the world. Any acts that are disrespectful to the rivers and lakes themselves – thus, polluting them, throwing in waste – are acts that are disrespectful to the Lu and therefore capable of inciting their anger.

"Pastures have specific histories and meanings that allow nomads to interact as part of a particular community and to belong to particular places; stones have gender and influence the imaginary of nomads with respect to male-female relations, place and oral history; rivers and lakes are residences of water spirits and nomads understand elements of the weather in terms of the emotional state of these spirits; some mountains are residences of territorial spirits that protect local areas, and other mountains are themselves deities that are part of a kinship system that extends across the Tibetan plateau.

"Animals, particularly female dri, are given names, they are stroked or slapped, they are cared for and milked, they are the wealth of a nomad household. These interactions are all based on relationships of care towards the animals and of worship towards deities, and they have a unifying relationship of protection, towards animals on the part of nomads and towards nomads on the part of deities. Close networks of care, protection and worship are analogous to each other, in that the care and protection that nomads display towards their animals is analogous to the care and protection that deities display towards nomads, who in turn, worship these deities for continued protection and analogously 'release', not sacrifice animals to the deities in order to appease them. Thus, the relationships between nomads and animals

are reinforced by the relationships between nomads and deities, the relationships between nomads themselves are reinforced by their relationships with different nonhuman Others. Taken singularly, these relationships are fragile but as a dense network of interlocking and reinforcing relationships, they form a stable foundation for making life on high-altitude pastures."[122]

This intimate, accumulating, embodied experience of life in the pasture, with the animals is sometimes encapsulated by outsiders as indigenous knowledge; a complex understanding of the dynamics of pastoral grazing that understands how to maintain both sustainability and productivity. Yet these abstractions quickly lose the flavour of the innumerable interconnections between humans and animals, humans and grasses. As soon as we generalise, we lose sight of the earthy specifics of the holistic, multi-dimensional understanding that made pastoral civilisation on the Tibetan Plateau a success for 9000 years.

NEW PASTORALIST ECONOMIES OF MUSHROOM AND FUNGUS HARVESTING

How can we get a better feel for the specific, conditional, ever-changing, highly contextual, multiple knowledges that are the alternative to the severely reductionist over-simplifications of the gaze of the Chinese state? How can we see what a Tibetan pastoralist sees as she gazes on the pasture?

One way of getting closer to the ongoing pastoral construction of reality is to take a closer look at two new industries which have sprung up on the Tibetan pasture lands, which often provide pastoralists with a higher and quicker income than livestock. The two new industries are the harvesting of *yartsa gumbu* and *matsutake* mushrooms, both of which sell for extraordinary prices in far distant markets that have made much of the Tibetan Plateau part of global commodity circulation.

Each is found in only parts of Tibet, mostly in the wetter, warmer east of Tibet. *Yartsa gumbu* (*ophiocordycepssinensis*) is quite widespread and available to the trained nomadic eye over the spring season, by gently prising from the earth, out of the surrounding grass, the fruiting body of a fungus that has infected and consumed a caterpillar of the grasslands. It takes patience, a keen eye, much bending, and long hours immersed in the specifics of here and now to spot the slender stalks between the blades of grass, but the financial rewards are spectacular. Many anthropologists, journalists and others have written, in depth, about the *yartsa* economy, but few have persevered, with a bent back, to master the art of actually finding them.

The *matsutake* mushrooms occur in a smaller area, in the remaining forests that until the 1990s covered much of eastern Tibet, in Yunnan and Sichuan provinces. The remnant forest is usually adjacent to pasture land, and it is usually the pastoralists, as well as Tibetan villagers from the agricultural valleys, who collect the *matsutake*, a delicacy in Japan.

How to find these underground mushrooms, hidden from sight, springing from the roots of trees which provide the fungus with nutrients? Fortunately, we have a thick description of what it takes to wander the forest and find *matsutake*, from a well-known anthropologist who also takes the spreading underground filamentous web of as her metaphor for how the world works, once we get past our over-simplifications. Anna Tsing and her *Matsutake* Worlds Research Group have been exploring *matsutake* for a decade. She explores the market, the urban myths that generate the demand, the logistics of the commodity chain, and the actual process of finding the mushrooms.

Anna Tsing relives her experience: *"Much of the knowledge mushroom pickers carry about the forest is kinetic knowledge - knowledge of how to move through the forest, navigating its sights, sounds and smells. While they may be*

122 Gillian G. Tan Re-examining human-nonhuman relations among nomads of Eastern Tibet, Working Paper #38, Alfred Deakin Research Institute, 2012, http://www.academia.edu/2069014/Re-examining_Human-nonhuman_Relations_among_Nomads_of_Eastern_Tibet

eloquent about explaining their movements, people become experts in mushroom foraging not through talk but by using their bodies. If we are generous about the meaning of words, it is not too far-fetched to consider mushroom foraging a form of dance. Foraging lines are generated by specific kinaesthetic principles, corresponding to varied aesthetic programs and histories of practice. Mushroom picking is 'searching'. Searching involves initiative and awareness. The mushrooms are hard to find. One must use all one's senses. Searching, I am alert to smell. ***Matsutake*** *have a pungent aroma, and sometimes I can pick it up before I find any mushrooms. My eyes sweep the ground, 'like windshield wipers', as one picker explains. Sometimes I get down on the ground to look at a better angle, or even to feel. For the secret of* ***matsutake*** *mushroom picking is this: One never looks for mushrooms. Every now and then one spots a whole mushroom - probably one discarded by animals or so old that worms have almost consumed it. Good mushrooms, however, are under the ground. To find a good mushroom, one looks for the signs of its growth, its activity line. Mushrooms move the ground slightly as they come up, and one must look for that site of movement. Some people call it a bump, but that implies a well-defined hillock, very rare. Instead, I sense a heave, an effect like the inhalation of breath in the chest. The heave is easy to imagine as the breath of the mushroom. The* ***matsutake*** *mushroom picker must search for the dynamic heaves, those that signal that a living thing is slowly, slowly pushing. One then feels the ground, perhaps inserting a stick. The mushroom may be two or three inches below the surface, but a good picker knows, having sensed the liveliness of the ground, the life line of the mushroom. Searching has a rhythm, both impassioned and still. No one can find a mushroom by hurrying through the forest. Slow down . . . slow down, I was constantly advised. Inexperienced pickers miss most of the mushrooms by moving too quickly; only careful observation reveals the earth's gentle heaves. Calm but fevered, impassioned but still: The picker's rhythm condenses the contradiction in a poised alertness."*

The Tibetan sciences of mind training abound in specific methods to cultivate this combination of determination to do what it takes to succeed, with a relaxed attentiveness to immediacy, a being in the moment, which makes for success. One could cite hundreds of texts by lamas and their commentators on this.

Anna Tsing writes: *"Pickers also study the forest.* ***Matsutake*** *establish a symbiotic relationship with certain trees, winding around and into their rootlets. Like us, they live off the sugars plants manufacture from sunlight; the trees feed them. In turn, like good farmers, they make nutrients available to their trees.* ***Matsutake*** *is unlikely to be found in fertile, well-watered places. Instead,* ***matsutake*** *is found in poor environments with few easily available nutrients: sand dunes; volcanic rock; eroded hillsides; high desert. If the trees are only a few decades grown from logging, no mushrooms will appear. If animals have left droppings and tracks, this is a good place to look. Life lines are entangled: candy cane and* ***matsutake****;* ***matsutake*** *and its host trees; host trees and suites of herbs, mosses, insects, soil bacteria, and forest animals; heaving bumps and mushroom pickers. My point so far is this:* ***Matsutake*** *mushroom pickers are alert to life lines in the forest. Searching with all the senses creates this alertness. It is a form of forest knowledge and appreciation. It lacks the completeness of a system of classification. Instead, searching brings us to the liveliness of nonhuman populations experienced as subjects rather than objects. We followed the tracks of earlier harvesters, touching their remains. Because* ***matsutake****, anchored to trees, come up again in the same spots, this was a surprisingly productive strategy. We aligned ourselves with invisible pickers who had gone before us but left traces of their activity lines. Nonhuman pickers were as important as humans in this strategy. Deer and elk love* ***matsutake****; when we found their spoor or tracks, they often led us to a patch. Bears turn over logs with* ***matsutake*** *underneath and create a mess, digging up the ground. But bears -like deer and elk- never take all the mushrooms. To find a recent animal digging is a sign that mushrooms may be around. Following the traces of animal lives, we entangled and aligned our movements, searching with them. The mushroom pickers I have described are observers of others' life performances, as well as performers of their own forest dances. They do not care about all the creatures of the forest; they are selective. But the way they notice is to incorporate others' life performances into their own performance. Intersecting life lines guide the performance, creating one kind of forest appreciation. Pickers, elk, pine trees, candy cane and* ***matsutake*** *mushrooms dance and wander in each other's paths, sometimes consequentially touching. Performance-based appreciation of human—nonhuman ecologies might offer models for environmental awareness for our times. It's time to return the dance back to you."*[123]

123 Anna Tsing, for the *Matsutake* Worlds Research Group;Dancing the Mushroom Forest *PAN: Philosophy, Activism, Nature no. 10, 2013,http://www.*

Anna Tsing, professor of anthropology at University of California began her research into the world of the *matsutake* harvesters years ago in the Tibetan uplands of Yunnan province, then went on to explore lifeworlds of harvesters in other cold forests, including the Pacific northwest forests of the US, where she joined elderly Japanese Americans, and younger Lao, Cambodian, Hmong and Mien refugees who arrived in America in the 1980s and later discovered, in the forests, ways of reinventing "Southeast Asian encampments in the middle of the Oregon woods."

Prof. Tsing's immersion in modern mushroom worlds and their global trafficking is grounded in an appreciation of them as companion species, much as pastoralists and yaks are companion species, interdependent and reliant on each other. The herder finds the grass and takes the herd there, protecting the animals day and night from wolves and poachers, blizzards and gales. The animals provide people with transport, food, shelter, clothing and even the dried dung fuel that, in treeless areas, is the only biomass that can cook a meal. This symbiotic connection between companion species may be invisible to official Chinese eyes but is a rich, mutually supportive life. Likewise, as Anna Tsing reminds us, just below the soil surface is a similarly complex web of companion species, of mushroom funguses and tree roots.

She writes: *"For mushroom lovers, the most intriguing interspecies companionship is that between fungi and plant roots. In mycorrhiza, the threads of the fungal body enter or sheathe the roots of plants. Indian pipes and other plants without chlorophyll are supported entirely from the nutrients they gain from fungi in their roots; many orchids cannot even germinate without fungal assistance. More generally, the fungus obtains sustenance from the plant while offering it minerals from the surrounding soil. Fungi can even bore into rocks, making their mineral elements available for plant growth. In the long history of the earth, fungi are responsible for enriching soil thus allowing plants to evolve; fungi channel minerals from rocks to plants. Trees are able to grow on poor soils because of the fungi that bring their roots phosphorus, magnesium, calcium, and more. In the area I live, foresters inoculate the roots of the Douglas fir seedlings they plant with Suillus (slippery jack) to aid reforestation. Meanwhile, many of the most favoured mushrooms of cuisine are mycorrhizal. In France, truffle farmers inoculate tree seedlings in fenced plots. But, of course, the fungi are perfectly capable of doing this work themselves--but with a more open geography. And so we mushroom-lovers wander, seeking the companionship of trees as well as mushrooms.*

"Fungal appetites are always ambivalent in their benevolence, depending on your point of view. The ability of fungi to degrade the cellulose and lignin of dead wood, so feared in protecting wooden houses, is also fungi's greatest gift to forest regeneration. Otherwise, the forest would be stacked with dead wood, and other organisms would have a smaller and smaller nutrient base. Meanwhile, the role of fungi in ecosystem renewal makes it more than obvious that fungi are always companions to other species. Species interdependence is a well-known fact--except when it comes to humans."[124]

The interdependence of species is usually too complex, too multivariate, for scientists to observe, enumerate and capture in data, even when they acknowledge complex interdependence is the norm. When the interactions of mutual aid occur underground, out of sight, that makes objectifying scientific observation all the harder. The simpler alternative is to ignore it. At best, it is the obscure fixation of a handful of specialists.

KNOWING LIKE A RHIZOME

Likewise with Tibetan understandings of grassland dynamics, modern China has neither an inherited tradition of appreciating how grasslands work, nor any curiosity to ask nomads what they know. It is striking how little there is in Chinese on traditional rangeland management knowledge and practices, while there are hundreds, even thousands of academic journal articles in Chinese by scientists measuring isolated facets of quantifiable problematics of the

panjournal.net/issues/10

124 Anna Tsing, Unruly Edges: Mushrooms as companion species, **http://tsingmushrooms.blogspot.com.au/**

Nomad woman milking Dri, the female yak, Tibet, 2013

rangelands. A search on the CNKI or CABI databases generates huge volumes of research reports on atomistic aspects, without any sense that the objects of investigation might be long familiar to customary rangeland users. The Chinese scientific journals of *Grassland Science* and*Pratacultural Science* alone publish over 100 research findings a year, and they have been publishing for over 20 years. Yet they fail to add up to an ecology.

Science worldwide has struggled, given its atomistic fragmentation of reality into artificially isolated chunks for investigation, to come up with the big picture, the holistic overview. Critiques of the truth claims of global science distil their unease into two key metaphors, which happen to coincide with the two foundational genera of China: the tree and the grass. The tree is the implicit model of modern science. It has its roots, but is mostly above ground. Its' trunk, branches, leaves, flowers and seeds all perform specific functions. The tree is discrete. It has a lifecycle, each tree has an individual history, each component performs its specific function, such as bringing water and nutrients up from the earth, or converting sunlight into fresh growth. It is a natural hierarchy.

Grasses, with their rhizomes, can only be spoken of as pluralities, for they are never singular. Shoots can tiller sideways to sprout roots, and spreading roots underground spring forth as new shoots, but is it the same plant, or a new one? This is interdependence, and interchangeability; it is production without the need for hierarchy.

Anna Tsing: ***"****As a model for culture, the rhizome resists the organizational structure of the root-tree system which charts causality along chronological lines and looks for the original source of 'things' and looks towards the pinnacle or conclusion of those 'things.' A rhizome, on the other hand, is characterized by 'ceaselessly established connections between semiotic chains, organizations of power, and circumstances relative to the arts, sciences, and social struggles.' Rather than narrativize history and culture, the rhizome presents history and culture as a map or wide array of attractions and influences with no specific origin or genesis, for a 'rhizome has no beginning or end; it is always in the middle, between things, interbeing, intermezzo.' The planar movement of the rhizome resists chronology and organization, instead favouring a nomadic system of growth and propagation.*

"In this model, culture spreads like the surface of a body of water, spreading towards available spaces or trickling downwards towards new spaces through fissures and gaps, eroding what is in its way. The surface can be interrupted and moved, but these disturbances leave no trace, as the water is charged with pressure and potential to always seek its equilibrium, and thereby establish smooth space."

PASTORALIST PRACTICES OF FREEING ANIMALS FROM SLAUGHTER

Meanwhile Tibetans persist, unreconstructed, in their primitive, prehistoric ways. Ethnographers have been able to observe Tibetan life, usually in remote areas, and give us a rich picture. For example, in the Tibetan prefecture of Yunnan province, officially redesignated as the true, authentic Shangri-La in the hopes of attracting tourism-generated wealth, Tibetan cadres persist in promoting not just their personal fortunes but that of the local government, by buying sheep so they can live out their lives free from being killed by humans.

Anthropologist Giovanni da Col writes: *"The idea of tshelen [freeing a life] inspired the planning of a state ceremony by the Dechen [county] government in April 2003. It was the Great Year of [sacred mountain] Khawa Karpo, the Water Sheep Year, according to the Tibetan calendar, an event that happens once every 60 years and attracts masses of pilgrims from all over the Tibetan world. Pilgrims are attracted by the Buddhist idea that all merit and benefits (phanthog) gained by circumambulating (gnaskor) the sacred mountain will be exponentially multiplied during that time. A few months previously, after gaining the approval of an eminent local 'living Buddha' (sprulku), Tashi and the director of the Dechen County Tourist Bureau had the idea to organize a massive government-sponsored liberation of life, to enhance the prosperity (Ch. fanrong) of the county and the fortunate outcome (rten 'brelyag) of the coming year. Sixty sheep were taken by 60 men to a beautiful and lush valley facing the sacred gate (gnassgo) of the inner pilgrimage (nangskor)*

to Khawa Karpo . Chosen by the living Buddha, the date for the ritual—26 April 2003—corresponded to the sheep day, sheep month, and sheep year on the Tibetan calendar. The idea was to add as many multipliers as possible to the fortune equation. The 60 sheep were bought for 200–300 CNY each in Markham, within the border of the Tibetan Autonomous Region and outside Dechen county, and were thus regarded as being more fortunate. Only shiny white sheep were chosen, all in good health and good-looking, endowed with long horns and abundant wool. For a minimum donation of 1,000 CNY, the 60 sheep were assigned to 60 men of different ages selected from all the county's townships according to a system of assigned quota. The donation was consistent, and the group was composed of several communist cadres and civil servants and their families. All of the men were born in the year of the sheep, based on the Tibetan calendar's 12-year cycle of animal years, and hence ranged from newborns in that very year to those aged 12, 24, 36, 48, and 60. Each sheep was marked with a sign (rtags) of being a tshethar: a red ribbon was inserted in a collar with the name of the donor.

"The 60 sheep were freed in Khawa Karpo 's pasture grounds in order to generate prosperity for the local government by reinforcing the relationship of hospitality between the county and its tutelary mountain deity. In the following months and years, the sheep all died of natural causes, since no villagers dared to kill them or use them for personal gain. The cadres involved in the project thought that the funding for the operation, collected through donations, could not be spent as ordinary currency, since it was a religious offering (dkor), and that using it to buy any commodity could bring misfortune. The substantial sum (60,000 CNY) was partly donated to local monasteries and employed for a vast purchase of luck-bringing prayer flags (rlungrta), which were hung in a famous offering spot in honour of Khawa Karpo . Even communist cadres had to pay attention to the management of their flows of fortune."[125]

LEARNING TO THINK OF ANIMALS AS RAW MATERIALS OF THE COMMODITY CHAIN

If official China's plans for the Tibetan grasslands follow what has already happened in Inner Mongolia, animals will be slaughtered as soon as they reach maximum weight gain: to hold them any longer is deemed inefficient. Pastoralists will have little role in the final months of each animal's life, which will be in an intensive feedlot. The Tibetan pastoralists will also have little role in the start-of-life stage of livestock, which are meant to have improved genetics, designed for maximum muscle gain, by breeding programs that are capital-intensive and technology-intensive. This will be done is specialised scientific breeding bases.

But between the infancy of livestock and their fast fattening to finish them for market is the intermediary stage of raising young animals and helping them grow, for as little as one year for sheep and goats, for at most three or four years for yaks. This is the labour-intensive phase, and also the phase of animal lives best suited to extensive land use making full use of unpredictably abundant meadows, often distant from the sedentary home base.

The remaining pastoralists, though accessing big areas in summer, will remain poor; since they lack market power to make prices paid to buy the genetically improved baby animals, and can expect only poor prices for stock sold to feedlots, which will be derided as skinny, scrawny and lacking in conformation to industry norms.

The pastoralists, despite remoteness and a high rate of illiteracy, know from experience that the current market economy is stacked against them. Their experience is that when they take animals to market, buyers –usually Muslim Chinese- collude to fix prices and not compete against each other. The Tibetan pastoralists guess that any future market economy will similarly be established on operating rules that present them with chronically adverse terms of trade. Hence they remain deeply ambivalent about the seductions of the market, the prospect of quick wealth accumulation and entry into the "China Dream".

125 Giovanni da Col, The Elementary Economies of Dechenwa Life: Fortune, Vitality, and the Mountain in Sino-Tibetan Borderlands; Social Analysis: The International Journal of Cultural and Social Practice, Volume 56 Issue 1, Spring 2012, 74-98

Pastoralists seldom think commercially, of profit and accumulation, intensification of production and accelerating slaughter rates. They have more immediate concerns. A young nomad, writing in English, recalls: *"When the calves were old enough to graze and could walk a long distance, their short thin legs were submerged in the grass near the tent. I wanted them to stay nearby so I could watch them from the tent entrance while enjoying a bowl of milk tea. Almost every day I had to run after the calves up the mountains and down along the rivers. Mother and my oldest sister were buried in work - collecting yak dung, milking, making butter, spinning yak hair, and braiding ropes. My older brothers had gone with the herds. Father was weaving yak-hair cloth. After breakfast, I walked out in the sunlight to see where the calves had gone. Since the sunlight was extremely bright on the pristine grassland, I pulled my hat down or put my right hand to my forehead to shade my eyes. I lay on the tender grass one day while grazing the calves and listened to the sound of gushing water in a nearby stream. I blankly looked up at the sky, where cottony white clouds were scooting south. While trying to ignore what was happening in the sky, I remembered a saying, "In the summer, when black and round clouds go south, they portend rain. In winter, when long thin clouds go north, they portend snow." It was clever and scientific, worthy of being written down. I wondered, "How many such intelligent sayings have disappeared in this nomad area, like dust scattered in the wind?" I couldn't answer that question."*

"The white clouds had disappeared, and had been replaced by dark clouds. Hordes of insects that had just been busily crawling around me had also disappeared. Flocks of birds were flying swiftly through the sky. I looked at the stream and saw splashes. Suddenly, a wind blew noisily across the grassland, laden with the fragrance of grass and meadow flowers. The wind raised surging waves deep in the sea of grass around me. I was intoxicated by the natural perfume for some moments, while the calves enjoyed the cool grass. Mother told me that when there was cool grass to eat in summer, the animals should be allowed to graze because they enjoy that moment more than anything that we can describe. It was the same for warm grass in winter. While pondering these things, I felt something wet on my head and shoulders. I realized it was raining gently. I stood up and took a long breath under the rain-filled sky, then drove the calves home. When I got back, Mother offered me a bowl of warm milk tea."[126]

Tibetans, especially the lamas, are frequently credited with preternatural prescience. The testament of the 13th Dalai Lama, written before he died in 1933, is often hailed as a magical foreknowledge of the arrival of Chinese communism in Tibet, 16 years before it happened. Yet the 13th Dalai Lama had detailed knowledge,in his final years, of the slaughter of Mongolian lamas, as communist revolution purged the monasteries of Mongolia.[127] Likewise, the pastoralists have seen for themselves that every statist intervention results in greater fragmentation, restricted herd sizes, overgrazing and poverty. Understandably, they are reluctant to go all out as commercialised producers integrated into a provincial or even national market they cannot in any significant way control.

PASTORALIST ATTITUDES TO ANIMAL WELFARE

Commercialised thinking instrumentally designates herd animals as means to the end of gaining cash. This is not customary, if we listen to how Tibetan pastoralists see their animals: "*Millions of stars studded the boundless sky that night, only to vanish at dawn's approach. The wind blew fiercely outside. Mother got up in a great hurry, still nursing her youngest child under her robe, worrying that she was late. She looked around at her sleeping children. She chanted something under her breath, and walked out of our black yak hair tent with her milking bucket, quietly and slowly so as to not disturb her children's tranquillity. She called her oldest daughter to help her untie the calves and hold them while she milked their mothers. She looked to the east to see what time it was, and felt happy that she could finish her job before it was too late. Every time she squeezed a teat turgid with nutritious milk, her vulnerable heart ached with pity for the calf tied to a nearby peg with a rough yak-hair rope. The calf would jerk on the rope with all his strength, looking hatefully in his mother's direction in its eager yearning for warm milk. After she finished milking a yak, Mother*

126 Karma Dondrub, Tibetan Nomad Childhood, Asian Highlands Perspectives #26, 2103, 36-7

127 Christopher Kaplonski, The Lama Question: Violence, Sovereignty, and Exception in Early Socialist Mongolia, University of Hawaii Press, 2015

untied the struggling calf with deep compassion. She thought, "If we were a little wealthier, I would not take milk from this poor calf," and then she went to the next yak. After she finished milking, she strode to the tent, entered, and put the bucket down."[128]

Instead, the pastoralists, while tempted by the promises of neoliberal modernity, often come back to traditional values. How else, for example, can one explain the popularity of the feature movie, filmed not once but twice in Tibet in the first decade of this century, *Drolma's Coral Necklace*, directed (both times) by popular crosstalker Shide Nyima? This film, set in the grasslands follows a typical pastoralist family of black tent dwelling nomads, of the kind that China contracts land to. Father is away in town, mother is busy with her chores but troubled by a persistent cough. The teenage daughter hopes father will buy her a necklace of red coral, like the one her friend has, on the brink of marriage. Her cheerful little brother races about. Father must buy medicine for his sick wife, and hopefully he will still have enough for a few nonessentials such as firecrackers for the boy, and the necklace the girl, Drolma, pines for.

Having set up this scenario, very little happens. The mother gets sicker, the daughter daydreams of being at the centre of the dance with her red coral necklace, the father trudges the town carefully checking prices. That he will return without the necklace can be seen coming a long way ahead, but when he does, the daughter is distraught, weeping so much the parents decide to sell their old *dri*, the cow that has given them so much milk, and is now one of their last animals, as they have slid into poverty because of mother's illness. Two dealers come to buy the cow, but it is springtime, the grass is only beginning to grow, the *dri* is skinny and not worth much. The dealers try to lead the *dri* away but she is reluctant to leave. The men start to beat her. Drolma is overcome with love for the old *dri*, rushes in to hug her and demand the men take their money back and let the *dri* stay. Compassion has overcome desire; she has awakened from her fixation on the coral necklace, and decides she will make do with a small, cheap plastic imitation necklace her little brother bought from a travelling peddler (played by the director).

That is all there is to the plot, and nearly all this action takes place in the final minutes. Most screen time is taken with fully experiencing the depth of fixation, the intensity of desire, the yearning for a necklace that signals womanhood, individual wealth and the prospect of a suitor. Only incidentally do we discover how poor they all are, that the overwintering animal pen is almost empty, that other families are already comfortably settled in permanent housing while these people are still black woven yak hair tent dwellers. The point of the film is the awakening of compassion, of transpersonal concern for the wellbeing of others.

Although the film industry in Tibet is much limited, by censorship and above all a lack of investment capital, the awakening of compassion is a common theme, as anthropologist Francoise Robin has noted. It is the preoccupation of all the films of director PemaTsedan too.

Drolma's Coral Necklace ends on an anticlimax. Everything shall be as before. The family remains poor, mother remains ill, their herd is vanishing, and they are in a downward spiral. All that has changed is that Drolma accepts reality, and that she cannot have that necklace.

This is hardly a plot that would sell in Hollywood. But to Tibetan audiences it was popular, a reminder, as in Tibetan opera, that the awakening of the mind to the bigger picture, beyond personal obsessions, is natural and inevitable, and this is what is uniquely Tibetan. Compassion for an animal that has effectively been part of the family is awakened as it is led away, and the daughter is clearly transformed by this awakening. To Tibetans this is a satisfactory ending, in much the way that the Hollywood revenge genre dwells endlessly on the insults borne by the main man, who in the final minutes bursts into violence, urged on by the audience which has sat through an hour or more of sharing his victimisation.

Such movies place pastoralism at the centre of Tibetan civilisation, herd animals as fellow sentient beings for whom compassion is proper, and awakening to the numinous an inevitability.

128 Karma Dondrub, Tibetan Nomad Childhood, Asian Highlands Perspectives #26, 2103, 72

FEUDING PASTORALISTS OF 'CAREFUL VILLAGE'

It is perhaps not accidental that a famous crosstalk performer should finance and (twice) direct a movie in which life in the black nomad yak hair tent is the familiar norm (and in no way an exotic locale), into which the temptations of modernity are starting to appear. The verbal duelling cross talkers of Tibet may be urban based, but they make fun of everyone, including feuding pastoralists, part of a long tradition of chiding, with care and compassion, those who make fools of themselves. The wildly popular *khashags* verbal duel routines, known to all in Tibet, rich and poor, urban and remote rural, hit the mark not only because they are witty, funny and deft in their playful use of the subtleties of the Tibetan language, but also because they skewer their foolish targets lovingly.

One of the best known*khashags* routine is available in English, set in the grasslands, in the fictional "Careful Village."[129] Not only is this a fictitious place name, the existence of a village at all, in a mobile nomadic landscape, is itself a fiction of modernity with Chinese characteristics. Administratively, the Chinese state cannot imagine an object of its gaze that is not at least a village, so there is an official category defined as the "administrative village" even when in reality the pastoralists are away with their herds, across the landscape, especially in summer. The state requires definable objects of scrutiny that make its subjects legible, and that object, by definition is the village. The category of village existed before there were recognisable villages, conveniently rebadged from the administrative structure of the livestock production communes of the 1960s and 1970s, whose smallest unit was the work brigade. Once China began reform and opening up, the work brigades were renamed villages. Thereafter, the state began encouraging nomads to settle, clustered together on the winter pastures, thus creating something like the imagined villages.

Villagisation was further strengthened, in the 1990s, by assigning specific allotments of land to specific nuclear families, complete with land tenure rights which were supposedly guaranteed for 30 to 50 years. The introduction of the surveyor's theodolite, and strictly demarcated boundaries, were meant as inducements to modernity, especially modern livestock breeding and herd improvement. Fencing of those boundaries was mandatory and, in the name of poverty alleviation, the state often provided the barbed wire, or paid at least some of the costs of fencing. However, fencing needs fence posts, and on the grasslands wooden posts are hard to obtain, even in areas where forests were nearby until recently, but were stripped by intensive official logging in the 1970s through to the 1990s. Thus the fences, though compulsory, were and are rickety, requiring much maintenance, and prone to fail, letting animals wander.

In the recent past, when the whole of the Tibetan Plateau was unfenced, the pasture had no territorially precise boundaries and there was a degree of tolerance when your animals strayed onto my land, and vice versa. That ambiguity and tolerance is now gone. It is now immediately obvious when your animals are on my land, and to add insult, how they pushed over the fence which I now have to fix. All over Tibet, fencing has not made for neighbourliness but for intensified disputes. These disputes are the topic for many of the comedy routines of the *khashags* performers, including the three lengthy routines set in "Careful Village." A further source of conflict is the unclear rights to common pool land beyond the fenced areas, which may be big, and utterly necessary for summer grazing.

The author and performer Smanblaskyabs begins the sketch with his arrival in the "village", as a writer seeking fresh material. He quickly finds it: the villagers are out for revenge against another "village" over wandering animals and access to the grassland. The villagers and especially their elderly headman mistake their urban visitor first for a doctor, then for a saintly lama whom they turn to, as is the custom, to mediate a solution to the grassland dispute. Rich comedy ensues. Even though the urban author, in the best stand-up comedic tradition, presents himself to us as a lowlife interested only in making money, but the villagers are convinced he is a holy man. The village leader speaks with prise and relish of their long history of stealing horses. He explains that:*"When the livestock were divided up among individual households and they had constructed fences in each place, and each family was allotted a mountain*

129 Timothy Thurston, 'Careful Village's Grassland Dispute': An Amdo dialect Tibetan crosstalk performance by Smanblaskyabs; CHINOPERL Journal of Chinese Oral and Performing Literature, 32 #2, 2013, 156-181

pass [for summer grazing], they let their horses and sheep stray into our land." As a result, many people have died, and the feud is escalating. Eventually, occupying most of this 18-minute routine, the fake lama persuades "Careful Village" to end the dispute, not by appealing to noble truths but by declaring, as if prophetically: *"If Careful Village fights over land, the village will be finished." But the villagers have the last word, happily deciding that: "Now that these two villages have reconciled, and since both inside and outside of the villages have joined together, we can have grassland wars with other villages!"*

The utter foolishness of this propensity for conflict, which long predates communes and fencing, is evident to any audience, including pastoralists, who know they are being gently chided for their truculence. This is part of a deep tradition in which the most revered yogis and lamas of Tibet, in their songs of realisation, frequently chide the rural Tibetans for their obsessive fixation on petty squabbles.

Deeply embedded in Tibet's pastoral production landscapes is a powerful solidarity among the clan or "village", joining together the "inside and outside" of the community to automatically help each other. The corollary of this entrenched in-group solidarity is a willingness to see the outgroup, in the next "village" as fair game, to be taken advantage of as opportunity arises. This is an ancient fault line in Tibetan pastoral nomadism, much denounced by great lamas and wandering yogis, but persistent, in a landscape of great risk, where knowing who you can rely on matters much.

Modern fences seem to have exacerbated these in/out group divides, while taking away from the lamas any overtly public role in settling disputes. The visible and precise demarcation enacted by fencing supplants the somewhat vague and overlapping pastures which were divided among pastoralists traditionally. It is precision that makes for quarrels and feuds, ambiguity and indeterminacy that prevented them. These days, it is the crosstalking*khashags* comedians who remonstrate with quarrelsome villagers, and then use the money they earn as popular comics to make movies that dwell on the seductive promise –even in a pastoralists' tent- of modern consumption, but in the end, show that it is possible to transcend desire and settle for reality.

The need for third parties to resolve pasture disputes, in the absence of effective collective management by the traditional tent circles of pasture users, is a recurring concern of Tibetan writers. The writer SonamDorjeLangtsang wrote an article entitled, "Where Are the Leaders in Charge of the Welfare of Rebkong People Hiding?"[130] He said in the piece, *"The local government officials ignore that national goals of harmony, cooperation and welfare. If the meat is fat, they eat it and if the wine is sweet, they drink it. But they won't fix the disputes and force the people to resolve the fights. For example, last week a lot of people got hurt in a four-hour fight on a mountain between the nomad and farming people of Changlung in Rebkong. A few herders and some monks from the monastery tried to mediate but none of the public welfare security people or police or local officials came to mediate or stop the conflict. It was left to the wives of the men who were hurt to take them to the hospital. The question is, where were all the policemen who usually come in droves when twenty or thirty Tibetans gather in one place?"*

Grassland feuds have traditionally ended due to the intervention of a lama, trusted by all to be impartially open to everyone, known to be undeceitful and not prone to favouritism. A young Tibetan, writing in English, tells the story of one such feud, ended by a lama's mediation, only to be refuelled by official interventions allocating land: *"Fortunately, high bla ma and various neighbouring tribal chieftains ended the conflicts and brought a peaceful life and relief from immeasurable sorrow and misery. However, unbearable enmity had pierced each villager's heart and, when they recalled the battles and martyrs, the only thing in their mind was revenge. Afterwards, though the conflicts ceased, the community had lost its previous unity. Time rushed on like the Dguchu River, and life on the grassland grew more complex. Laughter was heard as rarely as flowers were seen growing in the sky. Meanwhile, the once-honest villagers became increasingly cunning. No one trusted anyone, not even their own relatives. Leaders cared only about their own benefit and worked for their own interest. The government divided the grassland between families and,*

130 http://www.tsanpo.com/forum/2237.html

predictably, government and local leaders colluded and allotted pastures according to the bribes they received. It was unfair, because the best pastures were then controlled by the well-connected families and their relatives, while high places and barren lands were given to poor families. Some of the latter families settled together and created Si rigs Village, where the climate was as cold as freezing earth, and sparse grass supported few livestock. As the calamity of harsh weather repeated itself several years in a row, and most of the livestock died, meeting basic needs for food and clothing became problematic. Life was unfair and Si rigs villagers became as poor as beggars. Meanwhile, few respected those who lived there. Villagers were the subject of frequent disdain and humiliation."[131]

Another writer called PalchenDhondup wrote a piece called"There is Certainly a Chaotic and Disordered Tibetan Character."[132] In it he said, *"One cause for the blood feuds and all these injuries from all this fighting over land rights is that in these two counties, the county officials don't educate the people about the constitution and the policies. Elsewhere too, as in these two counties, the knowledge of the law is very low. In all these many years, in prefecture and county, town, township and village, they have taught people to oppose splittism, to oppose disturbance to national unity and to oppose destruction, theft and robbery, and they have introduced people to the laws and policies of the regional autonomy; but they haven't done anything to really create safety and security among the public or anything about people's legal rights, and they haven't take any steps or made any decisions to solve land rights disputes between different groups or people."*

The movie *Drolma's Coral Necklace* and the *khashags*crosstalk comedy of *Careful Village* share a common sensibility. At a time when lamas are tightly restricted in the public sphere, and can seldom speak out to remind people to transcend their individual yearnings and awaken to compassion for others, Tibet's popular comedians step in with the same message, on stage and on film. This suggests that the wrestle with personal desires and the mental peace to be found by accepting reality are values deeply embedded in Tibetan culture and not just virtues preached by an elite. Similarly, despite the frequency of pastoral feuds, reminders that feuding is endless, pointless and wasteful are also common, welcome, and may these days come from a comic as well as from a lama.

There are now lamas who do speak up publicly about the ills of these times, who also connect the frequency of pastoral disputes over grass, the deterioration of Tibetan language, the morality of abstaining from meat, and other ills caused by the temptations of modernity.

The seductive prospects of modern production and consumption are reasons why there is now a vigorous vegetarianism movement spreading across remote areas of Tibet, especially in the livestock production landscapes. Although, in the eyes of modernity, foregoing meat condemns pastoralists to further poverty, its appeal, to the pastoralists themselves, is that it offers a turn away from the market economy and its' positioning of herders as losers. The clear guidance offered by charismatic lamas is that the sacred vow to adopt a vegetarian diet is an entry into a higher life and a better rebirth, and incidentally another marker of Tibetan identity.

The seductive appeal of consumption, and the warmth of modern comfort reach to even the remotest pastures. A young pastoralist, recalling his childhood, writes: "*It was so cold that I felt as if my blood had stopped circulating. My heart trembled and my bones quivered. While opening the sheep pen, I saw Dondrub driving his sheep away from our camp.The turquoise sky was crystal clear. As soon as I got near enough to hear Dondrub's voice, he said, "It's a very cold day. Maybethe coldest day this winter." I agreed, but I was too cold to utter what I had in my mouth so I just nodded. He told me to collect yak dung to make a fire while he cut some plants that we always burn first as kindling. I was so cold that my hands and feet didn't seem to exist anymore. I even couldn't bend over to collect yak dung. Dondrub collected yak dung, cut some kindling plants, made a fire, and brewed a pot of tea. I stepped near the fire to warm up as the wind carried a thick plume of smoke to a distant mountain. My eyes followed the smoke as it vanished into the distance. The tea was boiling. I got warmer. Dondrub told me it was time to eat. Suddenly he asked, "What do you think about the weather?" "It's just cold," I replied. "You children will get used to it when you grow up. What's your plan for your*

131 PemaRinchen, Conflict; in Asian Highlands Perspectives #28, 2013
132 http://www.tsanpo.com/debate/2228.html

future?" he said. "I don't know yet, but I won't herd if herding is this hard," I said. He was a little sad when he heard that. "Yes, it is better to have ambitions but it's impossible for a wolf cub to become a lion. A wolf pup will be a wolf all its life," he said. I knew that he was telling the truth, but I didn't like it somehow. I drank tea from his black pot silently. Our conversation stopped there, just like a finished poem with a mysterious ending. I was bored to death."[133]

THE LAMAS AND THE PASTORALISTS

As some lamas have gradually found their way back into the public sphere, despite official curtailment of their traditional role, this has become a much debated topic. Well-known Tibetan essayists and public intellectuals, such as Jamyang Kyi, have denounced this push for Tibetans, with every mouthful, to declare their loyalties. She calls it a backward, even fundamentalist movement to deny modernity in all forms, condemning pastoralists to poverty and women, in need of nourishment for self and baby, to malnutrition. Scholars outside of China and Tibet have generally found the movement to abstain from meat, for specified periods, often years, to be bizarre.

Yet this movement steadily grows in strength, as does the popular movement to speak Tibetan whenever possible, and to speak it purely, without admixing Chinese. The derogatory term for language fusion and code switching is, in Tibetan, *ramalug*, meaning "neither sheep nor goat." This insistence on maintaining linguistic solidarity is widely popular, as a way of insisting on difference, and resisting China's assimilationist *Zhonghua minzu* program of creating a unitary state in which ethnicity is at most a private choice that has no bearing on public life.

The meat abstention movement is similar. Explicitly it valorises an old Tibetan tradition of refraining from meat, as a purification of body and mind, on specific holy days, or as an offering conducive to the long life of a revered lama, such as the elderly Dalai Lama. There are routinely meatless days each month for those who follow the calendar of Buddhist observance. The arguments advanced by the lamas who advocate extending these observances, to vows encompassing a year or a few years of abstention, are part of a package of contemporary vows written specifically with contemporary proto-modern behaviours in mind.

The new ten virtues, immediately recognisable to Tibetans as a contemporary version of the widely known lay vow to abstain from harm, are: no livestock trading for the purpose of slaughtering, no stealing and plundering, no carrying of harmful weapons on one's body, no use of prostitutes, no drugs or firearms dealings, no cigarette smoking and drug taking, no alcohol, no gambling, no hunting, and no wearing of animal furs.[134] Their common focus is the integrity of sentient embodiments.

Kabzung, associate professor in the Centre for Tibetan Studies at Sichuan University, sums up the wide spread of these ten virtues as: *"combinations of the past with the contemporary, traditional with modern discourses and religion with national identity."*

They are commonly implemented in collective vow-taking ceremonies in which entire villages assemble in the presence of a lama. For example, according to a Tibetan-language radio report: *"Hundreds of Tibetan nomads living in western China's Sichuan province assembled at a Buddhist monastery this week to recommit themselves to good behaviour in their communities, vowing especially not to kill, steal, or gamble, sources said. The three-day gathering in Dzamthang (Rangtang) county was aimed at further strengthening harmony within the Tibetan community, a local source told RFA's Tibetan Service. 'It marked the completion of a three-year period of local Tibetans' abiding by vows they had taken not to commit murder, gamble, or steal,' RFA's source said, speaking on condition of anonymity. The gathering, which ran from Feb. 25-27 and involved the residents of three area villages, was held so that participants could 'review their behaviour over the last three years and recommit themselves to good conduct in the future,' the*

133 Karma Dondrub, Tibetan Nomad Childhood, Asian Highlands Perspectives #26, 2103, 65-7

134 Kabzung (Ga'errang), Alternative development on the Tibetan Plateau: The case of the slaughter renunciation movement, PhD dissertation, University of Colorado, 2012, 144

source said. Those who had failed in their commitments were encouraged to repent and take their vows again, he added. Held in the courtyard of Dzamthang's Choje monastery, the meetings "were attended by community members of all ages," the source said. 'On the first day, the members of Gong Gyu village—especially the younger members—renewed their vows and commitments. Then, on the second day, the residents of Karthok village took part. And on the third day, the male residents of Namda village restored their vows and committed themselves to maintain them.'"[135]

To outsiders, this process smacks of coercion and even fundamentalism.[136] To most Tibetans this is a convergence of Tibetan Buddhism with Tibetan identity, a reassertion of *"Tibetan Buddhism as a future path for the Tibetan people, highlighting Tibetan people's ownership of Tibetan Buddhism [and] the incorporation of the discourse of modern nationalism into Tibetan Buddhism."*[137]

TIBETAN VIRTUES FOR A NEOLIBERAL PASTORAL ECONOMY

This bundling of contemporary virtues rests on an awareness that in China's neoliberal economy, Tibetans who enter the market economy as commercial livestock producers do so with the rules of the game tilted against them. Based on fieldwork and interviews with many pastoralists in Hongyuan, in south-eastern Tibet, Kabzung critiques neoliberalism explicitly: *"Neo-liberal development always produces two abilities: to produce disparity in economic development, and the ability to make those social problems (caused by disparity) invisible, turning them into moral issues or individual faults. It hides the unbalanced power distribution among stakeholders and the inclusion or exclusion from access to resources, forcing marginalized group to associate with some 'illegal' or 'unethical' things to compete with legalized beneficiaries. When social inequality forces more marginalized people into disadvantaged situations or exclude them from accessing lucrative resources, while they are lured by the benefit gained by others from development, they venture to take immoral actions to make a living, which is a way for them to make sense of or benefit from development. For instance, in Hongyuan County, there is a phenomenon of what I call "the exclusion of inclusion" in neo-liberal economic development. The market economic development has increasingly manipulated all aspects of Tibetan herders' lives and forced them to participate in the market economy. When neo-liberal development brings prosperity and guarantees for one group in society, it triggers poverty and conflicts for others. Yet, in most cases, the poverty and related conflicts are easily treated as a social disorder by the state, which launches further regulations on those unstable marginalized groups. Similarly, the symptoms of poverty and marginalization are also seen as moral degradation by Tibetan lamas that need to be corrected through their religious teachings and establishing moral rules, like Ten-virtuous-rules."*[138]

The more official China presses the pastoralists for both intensified production (higher slaughter rates) and reduced grazing (grazing bans), the more pastoralists see the wisdom of withdrawing from the market economy. The demands of the state appear to pastoralists to be contradictory: to increase meat production while reducing grazing, and impossible to achieve. The price of market entry is too great, and the returns too meagre. They readily take to the ten virtues, usually not as vows taken individually but as a village, which enlists group monitoring to encourage compliance.

Abstaining from meat, far from being a vow coercively forced on Tibetan pastoralists, to their detriment and further impoverishment, arises from direct experience of living with animals, especially experiences that undermine the privileging of self over other sentient creatures. Here is the voice of a 22-year-old Tibetan man, brought up in a pasturing family, telling of a childhood moment when he was angry with his wandering cows for getting him into trouble: *"Uncle was herding that day. He saw me misbehaving, came to me, and began telling one of his never-ending*

135 Tibetans Hold Mass Meetings to Reaffirm Civic Virtues, Radio Free Asia, 2015-02-27 http://www.rfa.org/english/news/tibet/meetings-02272015154102.html

136 Katia Buffetrille, A controversy on vegetarianism, in Roberto Vitali ed., Trails of the Tibetan Tradition, Papers for Eliot Sperling, AmnyeMachen Institute, 2014, 113-128 Holly Gayley, Reimagining Buddhist Ethics on the Tibetan Plateau, Journal of Buddhist Ethics, Volume 20, 2013

137 Kabzung dissertation, 143-4

138 Kabzung dissertation, 149-151

stories while puffing on his pipe. 'I am not sure why you are beating them,' Uncle said. 'But one thing is sure: they are always innocent. They are our saviours; we depend on them to live. During the Cultural Revolution, the crops in the fields all belonged to the government. People were starving to death. Death could come to anyone at any moment. Gold, coral, and other treasures had no value. We sometimes saw piles of coral lying on the ground and nobody had any interest in it. Without food to purchase, what was the use of such things? Luckily, I was a goat herder for the production brigade then. Once those goats saved my life, and that's why I am now a vegetarian. Another herder and I were with the goats on the grazing land. We ran out of food and were about to leave for our village. Suddenly, there was a big storm and we had to stay for another five days. That was the rule of the production brigade. When it rained, the goats drank rainwater and didn't have to go for water. We stayed, carefully tending the goats. We knew our lives depended on them. However, hunger finally drove both of us mad. We couldn't bear it any more. We thought of butchering a goat and reporting that a wolf had stolen it. Certainly, we wouldn't have much trouble then. But who knew what might happen if somebody learned this and reported it to the production brigade? People were hard to understand at that time. They only cared about themselves. Some people even reported their fathers' so-called mistakes to officials in order to benefit themselves. We finally decided to drink goat milk to survive. My friend held a goat by the neck, and I started to milk, but the goat was so stubborn and wild that I couldn't manage to milk it. Then my friend knocked the goat down. 'Suck the milk from its teats,' my friend said. I hesitated for a bit, and then nursed like a thirsty elephant. I suckled all the milk but still felt very hungry. We caught another goat, and my friend did the same thing. Every day, we drank goat milk. Although it didn't alleviate our hunger, it was nutritious and kept us alive. We drove the goats home five days later. We had to cross a big desert on the way back and almost died. Suddenly, a brutal idea occurred to me: We could butcher two kids the production brigade didn't know about. I told my friend, and he immediately agreed. Thinking back, our behaviour was so cruel, for we killed two innocent kids, roasted them, and ate them in front of their mothers. The gate to Nirvana will never, ever open for me, Om Mani Peme Hung...He was breathing and chanting together as he kneaded his old prayer beads with the timeworn nails of his left hand.We were alive, but once our stomachs were full, we felt extremely guilty and seeing blood and pieces of goat skin here and there made us feel even guiltier. "My dearest nephew," Uncle said, rubbing my little head with both of his hands, "When I saw you beat those innocent animals, I recalled my wrongdoing. For the sake of those animals and me, please don't do this again in the future. Always put yourself in their position. You will understand how unbearable it is if you were an animal and maltreated by others." Uncle's kind words released compassion and sympathy in my heart. As I looked into the cows' eyes, it seemed I saw their teardrops shimmering like thousands of sharp, doubled-edged swords. I suddenly felt very sorry for mistreating them."[139]

DO PASTORALISTS KNOW WHEN THEY OVER-GRAZE?

China's requirement that pastoral production increase, while grazing reduces, rests on the concept of a scientifically formulated balance between available forage and livestock numbers. Not only has enumerating that formulaic calculation of carrying capacities and stocking rates proven elusive in practice, as Chinese science has struggled to obtain sufficient data, the basic concept makes no sense to Tibetan pastoralists.

When asked, pastoralists do have quite clear ways of knowing if they are pushing the grassland too hard, beyond its capacity. But these are not stocking rate calculations of beasts per hectare; they are behavioural signs, evident in the animals, that will tell the pastoralist he has a problem. Kabzung interviewed many pastoralists in south-eastern Tibet, Yonten Nyima did so in Nagchu, in north-western Tibet, a pastoral district bordering on the alpine desert of the Changtang northern plain. Yonten Nyima introduces a case study: *"Nyama is the head of the household of an average family in the central research village in terms of herd size (50 yaks, 60 sheep and ten goats), population (six people with five labourers) and off-range income (none).'If I keep more than this, there would not be enough forage. More would die in spring and become useless. That is to say it is useless to keep more than the grassland can support. Even if the livestock survive the spring, but if their meat is barely edible or the females do not produce much milk, then there is*

139 Tsering Bum, A Northeastern Tibetan Childhood, Asian Highlands Perspectives #27, 2013, 13-14

no point of keeping many livestock.[140] *It would be just more work and more worries without more benefits. Of course, if the grassland is large, the more [livestock], the better if the family can manage them.' Here are two points that are noteworthy. First, he did not use* shong tshad*, the literally translated term for carrying capacity when Nyama expressed his sense of "carrying capacity." Instead, he articulated it through forage availability and livestock conditions. Second, for Nyama, the effects of having more livestock than his rangeland can support is reduced livestock productivity, rather than degradation. That degradation is not a concern for Nyama reflects the fact that grazing to date has not caused any degradation."*

This introduces a different way of assessing degradation and overstocking, knowable if animals fail to make it through winter and early spring, if their meat is tough and inedible, if the females are unable to produce enough milk. These are tangible and well known indicators of having been greedy for more than the land can sustain, or, more usually, of a seasonal failure of the early spring rains that make for a fat year. Although the concept of carrying capacity has been made a Tibetan term, *shong tshad*, it is hardly in use, because degradation is seldom something pastoralists know experientially, nor is the putative mathematized optimal stocking rate a calculation they are used to making; to them it all seems too hypothetical. They much prefer what they can see and taste: animals starving, ewes and *dri* with insufficient milk for their babies, tough and inedible meat.

This preference for behaviour over a mathematised formula, for the volume of milk and the chewiness of meat as a better indicator than an abstract concept of carrying capacity, is more than a simple anthropomorphic preference for animal over vegetable. From an ecological perspective, the health of an entire ecosystem is best assessed by the status of the top predator, the species which relies on all trophic levels below for its existence. In the rangelands, the grass grazers are dominant species, and if their productivity dwindles –quantitatively or qualitatively- this is a reliable indicator that the whole system is stressed.

PASTORAL GATHERERS OF NATURE'S PROVISIONING

These are not the only differences in how the rangeland looks through the eyes of pastoralists. China's approach, like the meat commodity systems in wealthy countries, is to define the situation as one of grass industry production management, efficiency and logistics. Tibetan nomads see themselves less as producers, more as gatherers of what nature provides, the only human intervention required being the mobility to ensure resources are not depleted, and the effort of gathering the milk, wool, hides, meat, medicinal herbs etc. necessary for human sustenance, shelter, and offerings for lives to come.

The differences between a producer and a gatherer are many, and basic. The producer is part of a commodity chain which, at each step, instrumentally adds value to a commodity that will ultimately be consumed by distant buyers for whom the price paid reflects the extent to which the commodity conforms to expectations of a standardised colour, feel, texture, taste etc. The producer is locked into a "paddock to plate" market chain that prescribes the body weight and size of each slaughtered beast, which puts pressure on the producer to breed animals of a conformity that fits the industrial processing specifications of slaughterhouse machinery, and focus group testing of consumer expectations. In standard modern agriculture this produces turkeys of a shape that means they are unable to breed without mechanical aids, cows that make so much milk they become seriously ill if not milked for even a day or two, cattle with fat marbled through their muscle tissue. In order to achieve a uniform product, the producer must invest heavily in technology, and is always under pressure to get big and even bigger, in the name of economies of scale, or get out.

The gatherer partakes of what arises naturally, and is not defined by gathering. In a gatherer's life there are many

140 Yonten Nyima (Yundannima in Chinese), From 'Retire Livestock, Restore Rangeland' to the Compensation for Ecological services: State interventions into rangeland ecosystems and pastoralism in Tibet, PhD dissertation, University of Colorado, 2012, 127

other purposes, which are not secondary to gathering. If we listen to what pastoralists say of their life, we discover much that is beyond the narrow concerns of "grass industry." The pastoralist lifeway was an end in itself, with plenty of time (and space in an unfenced land) to appreciate the environment. A young nomad, recalling in 2013 his childhood, and writing in English, states:

"Early the next morning, we drove the yaks and sheep to the new camp with our pack yaks and horses. Packing the tent was difficult. It required two very strong men and a yak. Thankfully, in our camp we had the custom of helping each other whenever a family found itself in difficulty and needing assistance. Our neighbours came to help our family pack our tent because Older Brother was still young and not strong enough. The scenery on the way was spectacular. Hundreds of grazing sheep and yaks were scattered on strips of lush green pasture. The views were more beautiful than anything I had ever seen. Occasionally, Older Brother and I caught sight of herds of deer and gazelle. I loved watching them stand alert, nervously observing us approach, and then spring away on their lithe, sinuous legs. Looking far off down the river valley, we could see an open area surrounded by small hills - our autumn camp. We reached our destination just as the sunset's brilliant hues were almost vanishing."[141]

Here are the words of a woman pastoralist, or *drogm*o in Tibetan, recalling her youth in Lithang, in eastern Tibet:

"I came to India in the year 1992 and it's been 20 years since I have arrived and lived here. When I was there in Tibet the natural beauty that surrounded us was breathtaking with forest, grassland and shrub land consisting of beautiful flowers and wild animals. In summer the nomads goes up to the grassland at high altitude and in winter comes down to the forest and there is little stops on the way between during spring and autumn season. The reason of migration is due to the availability of pastures which the animals themselves follow and also due to the pest problem. In the month of June, July and august there is a wide bloom of different varieties of colourful flowers which literally hurt your eyes if you look at it directly due to the high concentration of bright colours. And the livestock feed on them and produce yellowish milk which is highly medicinal and produces much better quality of butter. The milk quality is far more superior to the one we get in India and the sheep are used for meat and clothing purposes.

"The nomads also collect different wild mushrooms and onions that grow in the forest or on the mountain. Different types of wild animals are also sighted like gazelle, wild boar, and bear and also deer with long pointy antlers. The grasses are much taller than the one I saw in the western part of Tibet and therefore the yak and other livestock are also much bigger and healthier. The strange thing I notice while I was a nomad in Tibet was comparing the grasses that have been grazed by the animals this year and the following year when they return the grasses that are grown on the area where the animals have grazed have much better quantity and quality of grasses with much more variety too.

"The fertilization or the production of livestock offspring completely dependent on natural process and the knowledge of the nomads concerning the variety and the positive and negative influence of crossbreeding of the inter and intra-species is very wide. The livestock are neither sold nor butchered for monetary gain and they don't produce offspring through greed or to accumulate money but is done by natural process with the help of indigenous knowledge about crossbreeding to benefit the quality not the quantity of the animals. There is a sense of pride among the nomads for their animal, just like a mother have for their children, the love for their animals is so great that in the summer time when they see their animals with their offspring grazing and playing in the beautiful grassland, they feel a surge of joy and pride and the feeling is immeasurable."[142]

This could be dismissed as the nostalgia of an exiled Tibetan, a romantic view of a lost past. But the more Tibetan pastoralists can speak for themselves, the more a different way of doing the world emerges. Here are the words, taken from an unstructured interview, of a man from Ngawa, eastern Tibet: *"The number of livestock per family differs with 300-400 livestock for poor to moderate families and substantially large no. of livestock's for wealthy family. When I was eight years old, my family had around more than 400 yaks and around 20-30 horses. And the nomadic families*

141 Karma Dondrub, Tibetan Nomad Childhood, Asian Highlands Perspectives #26, 2103, 26-7

142 Transcript of interview conducted by Tenzin Thutop for environment science program, Forest Research Institute, Dehra Dun, India, 2012

have specific rules and customs regarding their rangeland management and livestock production but with the arrival of Chinese there were lots of changes.

"There are a lot of problems arising due to difference in opinion between the Chinese and the Tibetan regarding grassland ecosystem rules and regulation. And due to the fencing of the rangeland which was distributed among families on the basis of number of family members lead to frequent dispute among people which were a rarity before the fencing took place. It also leads to a lot of robbery cases plus from the introduction of stringent Chinese rule of keeping a specific number of livestock. In my opinion the difference in opinion arises due to the fact that the Chinese official doesn't understand the complex nature of nomadic lifestyle and should incorporate the Tibetan nomad's indigenous knowledge into consideration when making any rules and regulation concerning these areas and the people."[143]

PASTORALISTS SLIDING INTO POVERTY

Now it is rare for one family to own and graze as many as 300 to 400 livestock. The complications of fencing and other restrictions have reduced herd sizes greatly, while, in neoliberal logic, enabling a few families to buy out neighbours, consolidate herds and build up to become the large-scale, specialised herd managers, employing the poor, that China's plans for the Tibetan grasslands explicitly see as the future.

A young pastoralist, Sonam Dungtso, writing in English of his youth, says: *"Families in Skunang have a tent in the summer pasture and a winter house. In the fourth lunar month, they begin moving to their summer pasture. They move repeatedly over the next six months to avoid over-grazing. Blankets, quilts, rtsam pa, rice, wheat flour, and cooking utensils are taken to their summer pasture. In the ninth lunar month they return to their winter houses. People herd wherever they want within village territory, but individual families have certain places surrounded by barbed wire where grass for winter fodder is protected from livestock. These individual lands are only around four or five mu in area, so people have adequate space to herd freely in surrounding pastures. An average household has seventy yaks and four horses; locals do not herd sheep. Families who have around 140 yaks and six horses are considered rich. Families considered poor have around twenty-five yaks and two horses."*[144]

Five mu is one fifth of a hectare, a fraction of the land required for the long wintering season if the herd is to survive. That is the officially allocated land, a major reason for overgrazing, shrinking herd numbers, and growing poverty.

Kelsang Tseten tells a similar story of the childhood village: *"Nor mgo villagers have a maximum of seventy-five mu of grazing land per person in their winter pasture and thirty mu in their summer pasture. In 1991, the village had much more grazing land, and villagers owned many yaks and sheep. The east side of the village was connected with Khasog Village in Rebgong County. For many years Nor mgo villagers were embroiled in feuds with this village over the use of grazing land. Local lamas and county government officials settled the conflict between the two villages. Nor mgo Village lost 4,000 mu of land in the settlement. A local saying describes a prosperous family thus, ''Go khabuyisgang, rgokhargyuyisgang, Inside the room is filled with children and outside of the room is filled with livestock.'' Before the Family Planning Policy was implemented in 1982, families in Nor mgo Village consisted of grandparents, parents, and an average of six children. Prior to 1991, Normgo villagers lived year-round in black yak-hair tents. The tent cover was supported by a ridged pole and internal poles as well as rope, supported by outer poles about two meters high. The tent cover hung from tension ropes fixed at the first fold of the cover and was supported by outer poles and pegged to the ground with wooden pins, about six meters away from the tent. Tents were constantly repaired and passed through the family for numerous generations. Families could move anywhere they wanted inside the village territory in the past, but*

143 Tenzin Thutop interview transcript 2012

144 Rinchen mtsho, Li Ping/ Tshebrtan sgrolma, Brtan ma skyid, Rinchen skyid, 'Jam dbyangs pa sangs, Rdorje tshebrtan, Skalbzang skyid, Bsodnams dung mtsho, Skalbzang tshebrtan, Ye shessgrol ma, Tshe ring chos 'tsho; Lo sar in Mdokhams: An Advanced English Reader for Tibetan Students, 2012, 161

in 1991 the government restricted movement by fencing the pastures. Since then, villagers moved from tents to houses. Housing materials were provided by the government, who also built the houses. Families needed to pay back the cost of the house after five years, with additional interest."[145]

These are firsthand accounts of the slide into poverty, engineered by a developmentalist state overtly committed to creating a comfortably well-off society (*xiaokang*) for all of its citizens. Yet, according to detailed fieldwork, interviewing *"a broad spectrum of different household types and single protagonists in their various roles and positions in society, economy, and administration: male and female pastoralists, semi-nomads, farmers, traders,"* and others in the core of the grazing ban area, it is clear that poverty is intensifying: *"the situation in the field made it quite obvious that the stocking units many households had at their disposal have already reached a (low) level decisive for their ability to maintain (or not) a pastoralist livelihood. As far as a "purely" pastoralist economy (that is, one solely relying on livestock) is concerned, the change of the household's stocking situation in Yushru'u clearly shows trends that elucidate an endangered subsistence capacity. [In 1989] an average rural individual in Yushru'u owned almost fifty-two SU [sheep units] and thus a livestock number that was twice as high as the poverty level mentioned above. It was a level slightly higher than in the 1950s, even though there were two serious snow disasters in Yushru'u during the 1980s. Ten years later, the numerical value of SU/person had already decreased to 28.56 and has since plummeted to such an extent that today, even on average all the rural inhabitants of Yushru'u TAP (25.17 SU/person) live just slightly above "the generally accepted break-off point for poverty in Tibetan nomad areas."*[146] This calculation assigns, for grazing impact purposes, a numerical value to a yak equivalent to five sheep, resulting in an SU number, meaning "sheep equivalent." The official provincial yearbooks of Yushu Prefecture show that in 1950 the average rural person had 7.9 yaks and 9.25 sheep; which by 1989, before rigid allocation of land and fencing, had risen somewhat to 8.04 yaks and 11.72 sheep. However, by 2005 this had fallen to 3.52 yaks per rural Tibetan, and 7.57 sheep, which is a recipe for poverty.

Impoverishing rural Tibetans was not the intended outcome of official policy, rather an unintended, perverse consequence of policies focussed on productivism. The immiserisation of Tibetan pastoralists, trapped on small land allocations degrading through lack of mobility, was not the purpose, yet every intervention by party-state power exacerbated the slide into poverty. Most obviously the *tuimu huancao* policy of closing pastures to grow more grass, and the grain-to-green sloping land conversion policy of ordering farmers to cease production and instead plant trees chosen for ecological reasons, directly restricted production by dryland farmers and pastoralists, reducing them to dependence on ration handouts by officials. But programs ostensibly aimed at increasing both production and incomes also had perverse effects, including the compulsory fencing, fodder crop cultivation and storage programs, which on paper looked good but in practice drove pastoralists into debt, and took scarce labour away from livestock production in the most productive summer season.

As these successive policies rolled out over the past 25 years, China also dedicated considerable funds for poverty alleviation, some of which was for Tibet. However, in practice, poverty relief was often delivered not as fungible cash but in the form of rolls of fencing wire and other goods tied to production intensification. Receiving such goods entails a commitment to spend much time erecting fences and maintaining them.

145 Rinchenm tsho et al., An Advanced English Reader for Tibetan Students, 2012, 188-9

146 Andreas Gruschke, Nomads Without Pastures, *Journal of the International Association of Tibetan Studies*, no. 4 (December 2008), 11-12

Nomad woman drying cheese, Tibet, 2013

Chapter Five:
Future Production Landscapes Of The Tibetan Plateau And The New Discourse Of Conservation

THE CURRENT TREND

Most of the Tibetan Plateau is, and has for thousands of years, been a production landscape, long foundational to Tibetan civilisation and its choice to focus so much of its energies on the sciences of discovering the nature of mind.

China has seldom looked at the Tibetan Plateau as a production landscape, so its loss seems trivial. Yet the pastoral zones of the Tibetan Plateau cover well over one million sq.kms, and provisioned the food security of all Tibetans, and beyond that, the surpluses (primarily of wool and dairy products) that supported the pilgrims and saints, yogis and solitary retreatants, as well as major monastic universities, dedicated to the sciences of mind. To this day, a remarkably high proportion of profoundly insightful teachers come from remote nomadic families.

The loss of food security in Tibet creates collective dependence on lowland China for not only processed foods and manufactures of all sorts, but now for even the most basic staples of survival.

The loss of a major production landscape matters to a planet in which China's acquisition of prime agricultural land in Africa, Asia, Australia and elsewhere, to maintain China's food security, arouses deep concerns about local impacts, and danger to local food security.[147]

None of this appears to trouble China, which is focused firmly on its' "green" agenda of declaring the ever expanding area of grazing bans and pastoralist removals a win for biodiversity protection, carbon capture and the provision of environmental services to water users far from Tibet. In future, should a global carbon trading regime emerge, pricing carbon sufficiently to energise active trading, the grazing ban areas could attract payments for environmental services from polluters around the world. This would freeze the supposedly temporary grazing bans, making them permanent, forever excluding from development the expanding areas declared nature reserves. It would incentivise China to further expand the grazing bans and "development forbidden" zones of the Main Functional Zoning system currently taking shape. It would excuse China from paying subsistence rations to excluded nomads, who will be reliant on even more distant payers worldwide. Conservationists worldwide will applaud China for doing the right thing, at least in Tibet, even if China continues to burn as much coal as the rest of the world combined elsewhere. For China, this is win/win all the way.

China, as an urban-based super power rising fast, will also feel it is spared the embarrassment of having folk wandering around remote areas like animals searching for grass. China's civilising mission will have succeeded, if the nomads cease nomadising, and either become ranchers –an option for few- or join the hundreds of millions working in factories as migrant labourers with no long-term right to reside in the cities where they are employed.

147 Global Strategic Framework for Food Security & Nutrition; Committee on World Food Security (CFS), 2014
Shan Guo, Geoffrey Qiping Shen, Zhan-Ming Chen, Rong Yu; Embodied cultivated land use in China 1987–2007, Ecological Indicators, 2014
Michael Kugelman and Susan L. Levenstein, The Global Farms Race: Land grabs, agricultural investment and the scramble for food security, Island Press, 2013 Feeding China: Prospects and challenges in the next decade; in OECD-FAO Agricultural Outlook 2013 Dr.Emelie K. Peine, China "Goes out": What does It Mean for Brazil? www.iatp.org/files/emelie_peine_iatp_webinar_02_11_2014.pdf Zhangyue Zhou, Achieving food security in China: past three decades and beyond; China Agricultural Economic Review, Vol. 2 No. 3, 2010 pp. 251-275

All the above is a highly plausible scenario, and, in official eyes, a desirable one.

Seeing like a state, that is the likeliest outcome of current trends. But there are trends the state prefers not to dwell on, but which drive the poor, and those hungry to get rich as fast as possible, who will look at the depopulated, emptied production landscapes of the Tibetan Plateau with primitive accumulation in mind. The likeliest new use for Tibet will be as a mine. Paradoxically, mining is likely to intensify, because of the dominance of conservation as the officially defined purpose of most of the Tibetan Plateau.

CONSERVATION AS A NEW HEGEMONIC DISCOURSE

China's 21st century program of depopulating its rangelands may have deep roots in Chinese suspicions of nomads, and modernist roots in the 20th century insistence on the ideology of productivism, an ideology shared by Qing dynasty modernisers, Republican and KMT China, by revolutionary communists and post-revolutionary neoliberal China alike. Yet these social forces do not fully explain why China, in the 21st century, moved to curtail and in many areas to altogether negate the mobile pastoralist mode of production.

One could argue that the decisive 21st century turn to cancel the pastoralist lifeway was the culmination of state failures over many prior decades, failures to understand rangeland dynamics, pastoralist management strategies, and failures of governance, of empty and contradictory institutions that aimed at intensifying production by means that only impoverished and alienated the actual pasture users, while failing to create a modern meat commodity chain.

Yet there is one element missing, which began to appear in the late 1980s, and as a new century became the master narrative of the central state, as it gazed from a great distance on the rangelands.

That new element is the discourse of conservation, itself a part of the paradoxical return of scarcity amid the plenty of a China accumulating wealth at an extraordinary rate.

When conservation of pasture land, and above all, water for downstream China that flows through the pastures from the glacial fountainheads of China's great rivers, across the pastures and then down to the lowlands, became a master narrative, it did not displace productivism, but sat alongside, despite the tension. The institutions of state power dedicated to productivism persisted, and remain powerful today; yet the discourse of fragile ecology, of rangeland degradation, of wilful overgrazing by ignorant herders not only created its own administrative institutions, it came, in many Tibetan areas, to eclipse even the productivist push.

A complex and calculatedly ambiguous system of land governance that, in the 20th century attempted to incentivise Tibetan pastoralists to commercialise and intensify meat production, and to disincentivise traditional mobility, got much more complex and contradictory once landscape protection was added. The same lands were depicted, by different arms of the state, as production landscapes, others as protection landscapes. Sometimes, within the Ministry of Agriculture, different departments and bureaus had opposed responsibilities, to ban grazing yet increase production. This remains so today, but, for global reasons, the conservation argument is in the ascendancy.

IS IT POSSIBLE TO HAVE BOTH PRODUCTIVITY AND CONSERVATION?

If this seems, to an outsider, messy and contradictory, even self-defeating yet strangely self-fulfilling, that is not how it seems to those most directly involved. To the pastoralists of Tibet, official policy makes no sense at all, if only because it has never been explained, discussed, negotiated, or had any significant input by those who inherit 9000 years of Tibetan rangeland management skills. This is an important point, to which we must return, as it has many implications.

To the policy makers and the lower level local government officials responsible for implementing official policies and programs, and to the scientists who problematize the rangelands and propose solutions, there is no contradiction between conservation and production. In the official view it is possible to have both; it is only a matter of objectively delineating which areas –often large- should be protected from grazing and herding; and which areas –often quite small- are suited to intensive feedlot-based livestock production operating as a modern industrial commodity chain.

China does have a coherent vision for the future of the Tibetan Plateau's many production landscapes, either as protected areas providing environmental services to urban consumers far downstream, or as enclaves of intensive livestock production on a large scale, reliant on fast throughput of animals fattened for slaughter on a diet of forage brought into the pens where the beasts spend their final months putting on fat and muscle, reliant on capital investment, technology, fossil fuels and an agropastoral mode of production, which will employ few people. China's vision for the future of Tibet is already being realised in the grasslands of Inner Mongolia, Xinjiang and in the far northeast of China, on grasslands that are further down the track of agribusiness industrialisation, because they are closer to main urban markets, have ready access to agricultural wastes suitable for feeding to cattle, and are climatically less extreme than Tibet. The future of Tibet is not hard to find. Intensification is a keyword among China's planners, who see the future of meat production restricted to enclaves, no longer requiring huge areas.

On paper, this plan to have both protection of fragile ecosystems and intensive meat production all makes sense, and cannot be dismissed as a malevolent plan to empty the land of Tibet, opening it to predatory extraction. Not only is the plan coherent, it includes poverty alleviation as one of its goals, along with rehabilitation of degrading rangelands and an industrial production machine for meat and dairy commodities. China has persuaded itself it can have it all, proving to the world its unique capacity for achieving multiple development goals simultaneously.

This vision for the future of Tibetan landscapes is worth serious consideration. It is a distinctively modernist vision, with a major role for private capital investing in agribusiness enterprises, and a major role for the party-state investing in infrastructure that provides market access for remote producers. Above all, it is an agricultural imaginary superimposed on the rangelands, making the extensive pastoral landscapes into something more like arable land on which capital-intensive agriculture generates great wealth.

FREEING LIVESTOCK PRODUCTION FROM LAND USE?

The strength of this vision is that there is no longer competition between pastoral land needed for extensive, mobile livestock production, and the need for red lines drawn around fragile landscapes to permanently protect them from grazing pressure. There is, it seems, plenty of room for both, even if conservation, and provision of environmental services to users far downstream and downwind from Tibet, locks away more and more land, as is steadily happening. No longer does this necessitate a trade-off, a zero/sum in which more protection means less livestock production, endangering food security of the Tibetan Plateau, despite its thousands of years of self-sufficiency. China can have all the environmental services of the Tibetan Plateau, and even expect the world to pay for them to continue, and also have its meat.

How is this possible? This is high modernism, the ultimate win/win solution, the acme of efficiency and rationality, of ecological environmental construction, to use a Chinese phrase, coupled with maximum production.

Perhaps the most persuasive version of this dream of protection and production available in English is the recent translation of much of the writings of the senior Inner Mongolia official Hao Yidong.[148]Hao, one of the many millions of Han Chinese who now make a supermajority of the population of Inner Mongolia, far outnumbering the Mongols, graduated from the Inner Mongolia Agriculture and Animal Husbandry College in 1968, at the height of the Cultural

148 Hao Yidong, The Way of Prairies: Grasslands and Human Civilization, Foreign Languages Press, 2014

Revolution, and promptly joined the staff of an animal husbandry station in a Mongol pastoral district. He remained in semi-arid Uliasutai county (Dong Ujimqin in Chinese), rising to be appointed head of its livestock breed improving station in 1981, while also rising in status in prefectural and provincial posts, and taking higher training courses at the graduate school of the Chinese Academy of Social Sciences and the Central Party School, which qualified him to travel widely, inspecting the cattle ranches of the US and the cattle stations of Australia, as models for what China's rangelands could and should become. He is one of the top 5000 Chinese officials included in the China Vitae database[149]of biographical information on leaders in government, politics, the military, education, business, and the media.

Hao Yidong writes a lot, primarily to persuade his party-state audience of the great future ahead for the Inner Mongolia Autonomous Region (IMAR) as a meat producer, if only the current "cells of highly modern animal husbandry operations" can be induced to multiply all over IMAR and the whole of China's rangelands. He writes juicy prose about "Secrets of Prairie Meat Flavour", dwelling at length on its tenderness, succulence, firm texture, and freedom from pollution. This is Xi Jinping's "China Dream" incarnate and incarnadine.

Hao Yidong also writes glowing accounts of his tours of American and Australian ranches, although, for the English translation *"three chapters on the American prairies have been abridged as this material is likely to be familiar to English readers."* Chinese readers get the full agribusiness romance of the American prairie in the 2012 Chinese language edition, as do readers of the Russian translation, and the translations into Mongolian Cyrillic for readers in independent Mongolia, and into the traditional Mongolian script for IMAR readers.

CHINA'S NEW RANCHERS

The future beckons. It is a bold future, of massive meat output, fast turnover of stock, high slaughter rates, and much capital investment, available only to the few with access to finance. Employment too will be only for the few, as these will be highly centralised and mechanised operations, selecting beasts for their genetics, especially fast weight gain, to be slaughtered as soon as they reach optimum weight.

Almost all aspects of this animal meat production line are unfamiliar, inaccessible, repugnant and even inconceivable to traditional pastoralists, be they Mongol of Tibetan. But they are no longer the focus of China's productivist hopes and plans. In China's eyes, the traditional pastoralists have not only failed the 21st century test of conserving the land, they also failed the 20th century expectation of intensified production. They are now surplus to requirements in every way, obstacles to progress, which will be made by bold Han Chinese entrepreneurs with special access to cheap finance, and the knowledge Hao Yidong offers, of how it is done on the American prairie and the Australian outback.

The party-state plays a key role, in many ways in making this prairie-to-plate production line feasible. Most obviously, it remains a state responsibility to build the transport corridors connecting production base with market. In IMAR the distances to major urban markets is not so great, and huge investments in transport infrastructure were driven by IMAR's massive mineral deposits, notably coal and iron ore, also rare earths and gas. Similarly, China is now investing massively in speeding up the transport connections between Xinjiang and the Chinese heartland, with high-speed rail lines under construction, in addition to pipelines carrying not only Xinjiang oil and gas to distant markets, but extending out to Kazakhstan, traversing Xinjiang en route to China's coast. At present, the Tibetan Plateau remains too far, too remote and too expensive to compete, except for the Tsaidam Basin's oil, gas and salt deposits, which have long been fully integrated into the petrochemical production chain, connected by both rail and pipeline to the major industrial manufacturing hubs of inland China.

Whether the intensification of IMAR and the current dramatic expansion of production in Xinjiang will suffice to

149 http://www.chinavitae.com/

meet China's demand is as yet uncertain, but the model clearly applies to the Tibetan Plateau, to be operationalised sooner rather than later, given the enormous capital expenditure of recent decades in modern infrastructure.

The party-state also plays a key role in its laws, regulations and policies, which make it easy to strip pastoral nomads of their land tenure certificates, and easy to award land to investors who need secure land, aggregated to suitable industrial scale, as their primary collateral for accessing loans. The *hukou* residential registration rules restricting pastoralists, the ambiguity of land laws, the doctrine of all land belonging to the state, and the party-state's suppression of pasture user organisations, all disempower pastoralists, and prevent them from adding value to their customary surpluses. At the same time, the privileged access to land and capital available to big corporations, whether state owned or private, make this intensification possible, even, as the IMAR dairy boom suggests, inevitable.

RED LINES ON MAPS: THE NEW CONSERVATION

The other driver of this bifurcated land classification is conservation, a discourse fast becoming hegemonic. There are strong arguments for conserving biodiversity, habitats and ecosystems of the Tibetan Plateau, which has biodiversity hot spots of exceptional diversity, a mix of climates and ecotones, and may have been the origin of many cold climate species that have gone on to colonise much of the northern hemisphere. Equally strong are the arguments that traditional Tibetan production landscape managers also managed to conserve biodiversity, by limiting the hunting of wild species, and by maintaining a light grazing pressure on pasture lands that had evolved with ungulate grazing pressure, over millions of years, which also maintain higher biodiversity under steady but moderate grazing pressure by domestic animals. Those lands traditionally conserved by such customary land use practices are now, belatedly, incorporated into global protected area databases, as addenda to those areas declared by sovereign states to be officially protected. They are now known as ICCAs, for Indigenously and Community-Conserved Areas, a clumsy name for an ancient practice that long predates the modern national park. At best, in China, ICCAs are seldom evident, because the conventional view is that *"China's civil society is still at its early self-discovery mode. In the Western regions, awareness of civil action is at its' infancy, the ability to take advantage of statutory legal system is very minimal."*[150]

Thus it remains highly contestable whether lines drawn by states on administrative maps or community practices embedded in everyday herd management are the most effective in achieving actual biodiversity outcomes. Traditional ICCAs included human use, while modern protected area designations usually restrict or altogether ban human use of the areas designated.

That is, however, an emerging debate which is yet to emerge in China. The current debate in China is all about red lines drawn on maps, in response to the trope of "fragile ecology", which now drives policy.

The extent of official protection, to the exclusion of other human uses, especially pastoralism, has increased to the point that the UN now classifies the North Tibetan Plateau-Kunlun Mountains alpine desert as having 67 per cent of its total area under official protection, far in excess of the global goal of 17 per cent of each ecoregion protected.[151] This ecoregion is both frigid and arid, being the highest plateau terrain, and furthest from the reach of rain bearing clouds in any direction. It is this ecoregion where the push for official protection began, as a global as well as a Chinese campaign whose public face was George Schaller, of the Wilderness Conservation Society. To Tibetans, this is upper Tibet, seldom visited, but important as the area where antelope go to give birth, in the brief summer when herbage is plentiful.

150 LI Bo , Yang Fangyi, Mu Suo, Zhang Zhongyun, Sun Shan, Shen Xiaoli, Lu Zhi; Review of CCA Studies in SW China, 2007, http://cmsdata.iucn.org/downloads/sw_china_cca_study.pdf

151 3 Asia Protected Planet Report 2014: Tracking progress towards targets for protected areas in Asia, UNEP, 2014, 26 http://wdpa.s3.amazonaws.com/WPC2014/asia_protected_planet_report.pdf

Tibetans are glad this vast northern plain, the Changtang, is officially protected. They are less sure that protection should extend to the wild yaks, lest they mate with their domestic females, undoing generations of breeding of yaks of a manageable size and docility. Other than that, the Tibetan pastoralists who make occasional use of the Changtang are pleased official protection is meant to end the indiscriminate slaughter of wild animals which was a popular sport among Chinese soldiers stationed in Tibet in the revolutionary period.

Schaller writes at length, and with passion, about his campaign to protect the Changtang: *"The Tibetan Plateau had infected me, particularly the Chang Tang. The name enchants. It conjures a vision of totemic loneliness, of space, silence, and desolation, a place of nowhere intimate –yet that is part of its beauty. I had long wanted to explore its secrets. In 1984 I finally had the opportunity to penetrate its vastness."*[152] By 1991, Schaller was ready to propose official state protection*: "After my surveys in 1988 and 1990, I discussed the need for a reserve with the Tibet Forest Bureau, and we also considered potential reserve boundaries and options for managing livestock and wildlife. The creation of a reserve is a complicated political process, needing the cooperation of forestry, agriculture, military, and other departments. However, the government of the Tibet Autonomous region was then becoming seriously concerned about conservation, and in December 1990 it approved in principle the establishment of a Chang Tang Nature Reserve."*[153]

Although there is neither forestry nor agriculture in the Changtang, these were the departments in charge, along with the military,who Schaller lobbied. Entirely absent from the negotiations were the Tibetan nomads. From the outset, inherent in Schaller's case, was a sharp critique of pastoral nomads as destructive of wildlife, especially of the wild yaks, but also of the kiang wild donkeys and *chiru* antelopes. Schaller continued campaigning for the Nature Reserve to be bigger, and to press for official rules excluding Tibetan pastoralists: *"Some areas need to be closed, at least during certain seasons. Use of the basin by nomads should be carefully regulated. Population growth will make sustainable management of resources in the reserve increasingly difficult. To limit such growth, further immigration should be prohibited."*[154]

The seed was sown. Even though Schaller's own narrative is of the slaughter being instigated by officials, to feed Chinese labourers on construction projects[155] and Muslim Chinese gold diggers,[156] Schaller took every opportunity to express his concern that Tibetan pastoralists would build permanent homes in the Changtang and degrade the pasture. [157] Schaller reports a party secretary assuring him that hunting has been banned, yet Schaller noticed a freshly shot Tibetan gazelle in the back of the official's SUV.[158] But he was concerned that the 1993 legislation officially establishing the Changtang nature reserve, an area the size of Schaller's native Germany, was *"not as a wilderness to be set aside as a park but as a multiple-use area where the needs and aspirations of the nomads must be considered."*[159]

CREATING WILDERNESS ON THE RANGELANDS

The recourse to state power as the ultimate solution to problems of conservation, and the exclusionary power of the state as the guarantor of successful conservation, espoused by Schaller, has increasingly become China's model, and rationale, for the creation of protected areas, not only in the remote Changtang but in the best pasture lands of the Tibetan Plateau.

The model outcome is an ideal type, a Platonic form existing nowhere on the inhabited earth, of pristine wilderness. The romantic ideal of wilderness is almost by definition, uninhabited by human animals. Schaller, whose soul aches

152 George B Schaller, Tibet Wild: A naturalist's journeys on the roof of the world, Island Press, 2012, 2
153 George B. Schaller, Tibet's Hidden Wilderness: Wildlife and nomads of the Chang Tang Nature Reserve, Abrams, 1997, 56
154 Schaller, Tibet's Hidden Wilderness, 154
155 Schaller, Tibet's Hidden Wilderness, 62
156 Schaller, Tibet's Hidden Wilderness, 157
157 Schaller, Tibet's Hidden Wilderness, 125
158 Schaller, Tibet's Hidden Wilderness, 91
159 Schaller, Tibet's Hidden Wilderness, 124

for the lonely wilderness, and who tells us how disinclined he is to listen to nomads, [160] wants nothing less than the wildest of wildernesses, in which the state stands guard to prevent any human predation.

This sharply dualistic opposition of man and nature, hardly Schaller's invention, has increasingly informed China's approach to Tibet. We now have, on official maps and plans, a sharp, territorial distinction between Tibet's production landscapes, which are shrinking, and protection landscapes, which are growing.

Man, the despoiler of nature, is an embedded concept of European culture, not of China's. It is the obverse of man, whose rightful place is to proclaim dominion over all the earth and all therein. Man as part of nature is not part of the European tradition, but it is in Chinese Taoism and Buddhism, and in the figure of the cultivated Confucian sage who cultivates learning for one's self by writing nature poetry arising from immersion in nature. When China a century ago cast aside its traditions, and instead embraced Mr. Science, the sharp distinction science makes between observer and the observed became the norm.

In a revolutionary, irreligious China, nature became the ultimate Other. Mao exhorted the Chinese to conquer nature, by sheer force of human will, which could even remove mountains. Inevitably, given the opposition of man and nature, there have also been times, especially in more recent years, when nature has been on a pedestal, admired and revered for offering everything we humans lack.

China's system of nature reserves, the term China uses for officially protected areas, is squarely based on nature as Other, to be kept apart from the depredations of humanity by strict regulations and red lines on maps. China's nature reserves are places of exceptional beauty, and especial richness of rare wildlife, or landforms of breathtaking angularity, or hotspots of biodiversity. A survey of nature reserves published in 1989 groups its list of all the reserves that then existed into broad categories: representative samples of natural ecosystems, paradises for rare animals, refuges for ancient plants, beautiful natural parks, , and natural geology museums. [161] Those are the chapter headings, following common practice worldwide.

EXCLUSIONARY REGULATIONS

In 1994 China promulgated official regulations governing the creation and administration of nature reserves. These regulations, currently in effect, enact a governance regime predicated on the model of nature reserves as areas of special beauty, biological diversity and outstanding qualities. In keeping with this model, the Regulations require that there be a science-based classification, within each nature reserve, into core zones, buffer zones and outer zones. The core zone, to be policed most strictly, is the zone from which all human activity is prohibited, even scientific research and visitors, in order that what is most precious is given best opportunity to flourish unimpeded by human presence of any sort.

The nature reserve regulations are clearly aimed at protecting that which is most precious, beautiful and exceptional. The regulations state: *"Article 18. Nature reserves may be divided into three parts: the core zone, buffer zone and experimental zone. The intact natural ecological systems and the areas where precious rare and vanishing wildlife species are concentrated within nature reserves shall be delimited as the core zone into which no units or individuals are allowed to enter. No scientific research activities are allowed in this zone except for those approved according to Article 27 of these Regulations. Certain amount of area surrounding the core zone may be designated as the buffer zone, where only scientific research and observation are allowed. The area surrounding the buffer zone may be designated as the experimental zone, where activities such as scientific experiment, educational practice, visit, tourism and the domestication and breeding of precious, rare and vanishing wildlife species may be carried out."*[162]

160 Schaller, Tibet's Hidden Wilderness, 124

161 Li Wenhua and Zhao Xianyang, China's Nature Reserves, Foreign Languages Press, 1989

162 Regulations of the People's Republic of China on Nature Reserves 中华人民共和国自然保护区条例 [已被修订CLI.2.10458(EN), Decree No. 167 of the State Council, 10-09-1994

In keeping with this strict regime of human exclusion from the purity of nature, the regulations are sweepingly comprehensive as to which human activities are banned, including both customary and modern uses of land: *"Article 26. In nature reserves, such activities as felling, grazing, hunting, fishing, gathering medicinal herbs, reclaiming, burning, mining, stone quarrying and sand dredging, shall be prohibited unless otherwise stipulated by relevant laws and regulations."*

Because traditional practices such as grazing domestic animals and medicinal herb gathering are criminalized, these enforceable rules, as is often the case in China, are deeply ambivalent about the human beings whose home has always been those lands now declared to be nature reserve. May they stay, or must they go?

On one hand, the regulations state: *"Article 5. The local economic construction, the production activities and everyday life of local residents shall be properly taken into consideration in the establishment and management of a nature reserve. Article 14. Proper consideration shall be given to the integrity and suitability of the protected objects and to the needs of local economic construction, and production activities and the daily life of local residents while determining the ranges and boundaries of nature reserves."*

On the other hand, the same regulations also state: *"Article 27. Nobody may be allowed to enter the core zone of nature reserves. If it is necessary for the residents living in the core zone of a nature reserve to move out, the local people's government shall make proper arrangement to have them settled down elsewhere. Article 35. Any unit or individual who, in violation of these Regulations, is engaged in such activities as felling, grazing, hunting, fishing, gathering medicinal herbs, reclaiming, burning the grass, mining, stone-quarrying and sand dredging, shall be punished according to relevant laws, administrative regulations. Article 24. The public security organ of the region where the nature reserves are located may set up its dispatched agency within the nature reserves to maintain public security if necessary. Article 25. The units, residents in the nature reserves and the personnel allowed to enter into the nature reserves shall comply with various regulations of administration, and subject themselves to the management institutions of the nature reserves."*

This ambivalence towards local communities whose homelands are proclaimed a nature reserve is not unusual. Many laws and regulations in China do the same, as will become apparent.

These regulations, then, can be used in a wide range of circumstances to achieve different policy objectives. When, in the early 1990s, the Changtang nature reserve was established, covering 298,000 sq.kms, all concerned could agree that protecting an alpine desert where Tibetan gazelles and antelopes migrate annually to breed, a huge area with very few human inhabitants, was good. But when the Three Rivers Source Area (Sanjiangyuan in Chinese) nature reserve was declared, covering an even bigger area of 363,000 sq.kms, there was no such consensus. The 17 counties are prime pasture, and home to a major portion of the entire Tibetan population. The powers of exclusion and compulsory removal, in the nature reserve regulations, legalised the shutting down of Tibetan pastoralism in a heartland of productive and sustainable livestock raising.

The key question is whether this production landscape is also a biodiversity hotspot, or of special significance for biodiversity conservation. The Three River Source nature reserve is 50 per cent bigger than the UK, so there are endangered species present, as there are in any area of that size anywhere there is life on earth. The UNEP-IUCN database of protected areas worldwide dutifully lists the rare species. The attractively designed protectedplanet.net website provides thumbnail pictures of 100 species found within this nature reserve, a list provided by the Institute of Zoology, of the Chinese Academy of Sciences. Of the 100 species, 13 are endangered. However, for only a few is this nature reserve their core habitat.

The Tibetan population in 2000 was over 525,000 people, almost exactly ten per cent of all Tibetans counted in China's 2000 census. A further 29,000 people in the nature reserve classified under the census as Mongols could be added, as they speak Tibetan as their main language, and are devoted to Tibetan Buddhism.

Is this why the entire 363,000 sq.kms is now a nature reserve? If so, the core areas, from which all human activity is banned, would be the key habitats of the most endangered species, and there would be active plans and programs to conserve biodiversity, and especially the most threatened species. There would also be publicity, as with the Changtang, on the beauty and special qualities of this wilderness. As this is the area where the great river of SE Asia, the Mekong, rises, and China's great rivers, both the Yangtze and Yellow, the scope for positive publicity, even the lyricism of George Schaller, abounds.

In reality, China's discourse on the Three Rivers Source area is solely about damage, loss, destruction, erosion, degradation, desertification, threats to downstream water supply and, to use the commonest term, *heitutan*, 黑土滩, translatable as black beach, meaning bare earth from which vegetation is gone, exposed to gales and blizzards, fast becoming bare rock.

The Three River Source nature reserve has been established for reasons diametrically opposite to the reasons for which all other nature reserves are established. The 1994 nature reserve regulations do make provision for official protection of entire landscapes, including degraded ones: *"Article 10. In the areas which meet one of the following requirements, a nature reserve shall be established: (1) typical physiographic areas, typical natural ecosystem areas, and those areas where the natural ecosystems have been damaged , but can be restored to the same category of natural ecosystems by proper protection; (2) where precious, rare and vanishing wildlife species are naturally concentrated; (3) having wetland, inland water bodies, forests, grassland and deserts which are of special protection value."*

The power to make a damaged ecosystem into a nature reserve is qualified by the clause specifying that it "can be restored to the same category of natural ecosystems by proper protection." Thus one would expect detailed plans, backed by adequate budgetary finance, for full ecosystem restoration. One might also expect that the necessity for declaring exclusion zones would be based on much detailed research, generating detailed mapping of the three watersheds, of the upper Yellow, Yangtze and Mekong rivers.

Indeed, as per regulations, much of the Three River Source nature reserve has been classified as core, buffer or outer experimental zone, the last being one in which limited human uses may continue. However, when one looks at an official map, such as the 2010 *Geographic Atlas of China*,[163] which has maps specifically for the Three River Source nature reserve, one delineating the problem, the other the proposed solution, of core, buffer and outer zones of remedial treatment, there is scant correlation between problem and solution. The problematizing map, *Condition of Ecological Environment of Three Rivers Source Region*, colour codes by problem, while leaving at least three quarters blank, indicating no problem.

The problems are categorised as 虫鼠混合区 Pest and rat mixed zone, 鼠灾区 Mice disaster zone, 虫害区 Insect damage zone, 毒杂草 Toxic weed and 退化草地 degraded meadow. This classification assumes that rodent population explosions are a primary cause of degradation, even though many scientific studies suggest they are a symptom of disturbance, not cause. However, China has dedicated much time and effort, and foreign aid money, to poisoning rodents in the Tibetan grasslands, work required of local Tibetan populations, who much dislike poisoning the animals which occur naturally. These population explosions are episodic, which is not conveyed by the fixity of the map.

Sensibly, the total Three River Source area is divided on these maps into watersheds, although the Yangtze and Mekong are lumped together. Thus the two areas are the Yellow River source (Ma Chu in Tibetan), occupying the north and east of the designated nature reserve, and the Yangtze/Mekong (Dri Chu and Za Chu in Tibetan) in the south and west. The two watersheds differ considerably in basic characteristics. The Yellow River rises in areas that are much drier, with rainfall well below 300mm a year, in alpine semi-desert that sustains sufficient grass for light grazing. The Yangtze and Yellow rise in higher mountains, some above 6000m, in areas that receive 400 to 500 mm of rain a year, with many glaciers at the multiple sources that both trap atmospheric moisture and steadily release it

163 Geographic Atlas of China (Zhongguo di li tuji), Zhongguo ditu chubanshe, www.sinomaps.cn, Beijing, 2009

year-round. This is a major reason why the Yangtze and Mekong are much bigger rivers than the Yellow.

According to this map, 18.7 per cent of the Yellow River upper catchment, in the nature reserve, is degraded, or 17,700 sq.kms, nearly all in Golok prefecture (Guoluo in Chinese), especially in Pema county (Banma in Chinese) and Darlag county (Dari in Chinese).

In the Yangtze & Mekong upper catchment 19.16 per cent is considered degraded, or 20,780 sq.kms, mostly in Chumarleb county (Qumalai in Chinese) on the north bank of the upper Yangtze, and Drito county (Zhiduo in Chinese) on the south bank. Combining both watersheds, the total area degraded is 38,500 sq.kms, in a nature reserve of 363,000 sq.kms.

In addition, there are the rodent disaster zone, insect damage zone and mixed pests zone, which add considerably to the patchwork of problems. Nonetheless, this mapped estimate, based on fieldwork published in 2002, suggests the degraded area is far less than other estimates, which vary greatly. There is little consistency in the estimates published by Chinese scientists and official bureaucracies, nor is there a consistent definition of degradation.

A 2012 in-depth review of what official China means by "degradation", by Tibetan researcher Yonten Nyima, found myriad definitions and estimations of the extent and seriousness of degradation.[164] Having gone through many official statements on the problem, and reporting huge discrepancies in estimates of the degraded area, he suggests this reflects the bureaucratic competition for funding from the central authorities.[165] While many official reports downplay degradation, others take a much more alarmist tone. Line ministries eligible for central funding, such as the Department of Agriculture and Animal Husbandry (DAAH) frequently talk of a rangeland degradation crisis. Yonten Nyima notes: *"government may overstate environmental problems in order to capture funding. As its title suggests, the purpose of the 2005 document of the regional DAAH 'Request regarding Increasing Investment in tuimu huancaoin the TAR' was to request the Ministry of Agriculture to increase investment in tuimu huancao [close pasture, grow more grass]in the region. The document explicitly articulates this: 'In 2003 and 2004, the total percentage of funding for tuimu huancao in Inner Mongolia, Xinjiang and Qinghai was 64.3% while only 0.76% in the TAR….The investment ratio in the TAR was obviously too low for the region given that its rangeland area accounts for one fifth of the country's rangeland and that it is the core area of the Qinghai-Tibet Plateau and the source region ofmany of the country's major rivers but with worsening rangeland desertification and degradation. We request that the Ministry of Agriculture…to increase investment in tuimu huancao in the TAR.'*

"Therefore, with this aim of capturing more funding for tuimu huancaoit was sensible for DAAH to overstate the extent of rangeland degradation in the region. This explains why DAAH added that '95% of the usable rangeland has been degraded to various extent and the degradation rate has been accelerating' in the proposal."[166]

HUMAN EXCLUSION ZONES

The second map in the Geographic Atlas is *Plan of Treatment in Three Rivers Source Region*, which shows almost the entire nature reserveas pasture land, other than the highest mountains and some remnant forest spared the chainsaw. Superimposed on this are the core exclusion zones, the buffer zones and the experimental outer zones, as required by the regulations for nature reserves. The core exclusion zones are not big, on any of the three watersheds, but they seldom coincide with the mapped degraded areas, especially on the upper Yangtze, where the total exclusion area is mostly upriver from the areas shown as degraded, and as rodent disaster zones. There is also a total exclusion

164 Yonten Nyima (Yundannima in Chinese), From 'Retire Livestock, Restore Rangeland' to the Compensation for Ecological services: State interventions into rangeland ecosystems and pastoralism in Tibet, PhD dissertation, University of Colorado, 2012, 134 – 150, downloadable from Proquest dissertations database

165 Andrew C Mertha, China's Water Warriors: Citizen action and policy change, Cornell, 2008

166 Yonten Nyima dissertation, 146

zone on the upper Mekong, in Zato county (Zhaduo in Chinese), whose name connotes, in Tibetan, the source of the Mekong.

On the uppermost Yellow River and its many sources, there are modest core exclusion zones, in Mato county, similarly named in Tibetan as the source of the Ma Chu, or yellow River. There are further exclusion zones in Gade county (Gande in Chinese) and in Machen (Maqin in Chinese).

The endangered species of the Three Rivers Source region are the snow leopard, which lives in the high mountains, not the plateau pasture lands; the *chiru* antelope, a pastureland dweller whose annual migratory cycle is much impeded by China's policy of compulsory fencing, all over the grasslands; the Chinese giant salamander and alpine stream salamander, the dhole fox, the goitred gazelle, the red panda, sambar deer and alpine musk deer, dwarf bharal, white lipped deer, takin, wild yak, 13 species in all.

The Three River Source nature reserve is far from the only protected area on the Tibetan Plateau, and there is almost no research or reports on how endangered species are to be protected within the Three River Source. Even the 2015 declaration of three semi-arid counties within the Three River Source as national parks, a higher status than nature reserve, does not come with a biodiversity protection plan yet.

Most of China's nature reserves are on the Tibetan Plateau, those in lowland China are much smaller. In addition to the two huge areas –the Changtang and Three River Source- there are many other nature reserves of considerable size, all based on excluding human use from much of the area delineated. Adjacent is the 83,000 sq.kms of the Hoh Xil nature reserve, a crucial area for protecting the endangered *chiru* antelope, an arid area where Tibetan conservationists have lost their lives battling Chinese Muslim poachers. Other substantial nature reserves of the Tibetan Plateau include Qomolangma (the Tibetan flanks of Mt Everest), and several lakes –Siling Tso, Panggong Tso, Mapam Yumtso, Nam Tso, and Yamdrok Tso. Also on the list is a portion of the water meadow/wetland of Dzoge (Ru'ergai in Chinese), Ganligahai, Manzetang Shidi, a crane reserve on the Yarlung Tsangporiver, and the nature reserves of Kongpo, Gonjo, Markham, Zayul, Changsha gongma, Litang (Haizishan in Chinese), Tewo and Tsangpo Daxiagu. Few of these are smaller than 100 sq.kms.[167]

These nature reserves were proposed, designed and declared with the survival of wildlife in mind, in contrast to Three River Source. They were chosen because they are prime habitat, key breeding areas and seasonal migration feeding grounds for migratory ungulates and birds. The biggest of all nature reserves until Three Rivers was supersized, the Changtang's 298,000 sq.kms, was specifically to protect the chiru antelope and other ungulates, whose seasonal grazing shaped the entire grasslands of the whole Tibetan Plateau.

SUCCESSFULLY TREATING DEGRADATION

Successful biodiversity conservation, especially in degraded areas, requires a plan, and finance to implement it. The Three River Source nature reserve does map a *"Plan of Treatment."* So what is the treatment that will restore habitat, improve biodiversity, rehabilitate degraded areas and halt erosion? The concept of treatment presupposes a problem sufficiently serious to necessitate interventions that generate a solution. China's generic term for rangeland degradation is *heitutan* 黑土滩 black beach, or black soil beach, covering any patch, small or big, where grasses are absent. An even vaguer term is *tuihua*, 退化, the usual term for degradation, which can mean any movement backwards.

An absence of grass cover is readily observed, not only by eye but also by satellite, but scientists have argued for decades as to how much loss of grass cover constitutes degradation. There is still no agreement, in fact there were

167 Details available from chinabirdnet, RAMSAR, Wildlife Conservation Society, and the UNEP-IUCN World Database on Protected Areas www.protectedplanet.net

dozens of conflicting definitions of degradation when Dee Mack Williams wrote at length about them in the late 1990s.[168]

Heitutan continues to be the all-inclusive category in use in China, with attempts at dividing black beach into subcategories, of degrees of degradation. But grazing pressure, from wild and domestic herds, is part of how these rangelands (a term that does not exist in Chinese) are constituted. If some grazing intensity is natural, how is one to define what is unnatural? Where does degradation begin? A recent investigation, conducted at 175 sites, all within the Three River Source nature reserve, to test exactly what is meant by *heitutan*, came up with a recommendation that much of what has been defined as degraded be classified henceforth as within normal grazing outcomes.[169] The usual four grades of *heitutan* black beach much used by Chinese scientists should, after careful analysis, be just two categories, and one of those two should no longer be called degraded at all.

This team of scientists, from the College of Agriculture and Animal Husbandry at Qinghai University, and New Zealand hydrologists, concluded that *: "Previously, four classes of grassland degradation have been differentiated in this large area: non-degraded alpine meadow and moderate, severe and extreme Heitutan. We evaluated existing field-based classifications of Heitutan in the Sanjiangyuan region, and examined the criteria on which these classifications are made, by using multivariate statistical approaches. First, we asked whether existing qualitative classifications, based on vegetation cover and the abundance of impalatable plant species, adequately describe the nature of degradation at different locations. We then used a suite of vegetation and soil measures collected across 175 sites spanning a range of degradation conditions to develop a new quantitative assessment of degradation across the alpine meadows of the Qinghai-Tibetan Plateau. Hierarchical classification highlights two broad classes of degradation: non-degraded alpine meadow and degraded Heitutan. The non-degraded category effectively combines the nondegraded grassland and moderate classes, whereas the degraded Heitutan combines the severe and extreme Heitutan classes."*

This is a sobering finding, based on measuring 175 locations within Three River Source nature reserve. What had been routinely classified as moderate degradation is in fact part of the normal fluctuation in pastures grazed both by domestic and wild animals, and should no longer be classified as part of the degradation spectrum. Only the more severe levels of degradation should be called *heitutan.* Will this new finding lead to a drastic scaling back of the area declared degraded, or will it be ignored?

Much is at stake. If seasonal grazing pressure has for decades wrongly been classified as degradation, the rationale for declaring the entire Three River Source a nature reserve, whose sole purpose is provision of environmental services, no longer for pastoral livelihoods, collapses. The entire edifice of "ecological migration", the supposedly voluntary, self-sacrificing willingness of Tibetan pastoralists to leave their lands, has been a major policy failure.

Is it possible that the alarmist rhetoric of 20 to 90 per cent of Tibetan pastures being degraded is a great exaggeration? The fact that the estimates of the extent of degradation, published in official policies and scientific research reports, do vary so enormously, between 20 and 90 per cent, in itself suggests ongoing failure to agree on a definition of degradation.

GRASS INDUSTRY: A NEW CATEGORY OF MODERNITY

The more closely one examines available data, the more likely it is that China, in its historic unfamiliarity with pastoral landscapes, has assumed that anything less than the full biomass of ungrazed grasses has been classified as degradation. As soon as pasture is grazed by domestic animals, it is to some extent to be considered degraded. Grazing

168 Dee Mack Williams, Beyond Great Walls: Environment, identity, and development on the Chinese grasslands of Inner Mongolia, Stanford, 2002, especially ch. 2: Land degradation and the Chinese discourse, and ch 3: The ambiguities of land degradation.

169 X.-L. Li, G. L. W. Perry, G. Brierley, H.-Q. Sun, C.-H. Li and G.-X. Lu; Quantitative Assessment of Degradation Classifications for Degraded Alpine Meadows (Heitutan), Sanjiangyuan, Western China; Land Degradation & Development 25: 417–427 (2014)

by wild herds, often large, is not factored in to such calculations. If that has indeed been the foundational assumption underlying the much of the discourse of grassland degradation, it is little wonder that once scientific measurements are done, on the ground or, more often from interpreting satellite imagery, alarming levels of degradation are detected.

Could it be that China's science, and policy making, has been so simplistic? Some Chinese prataculturists do explicitly say there is a contradiction between grass and animals. Prataculture is a science specific to China, the word is hard to find in use anywhere in the English speaking world. It is a direct translation of *cao ye*草业, meaning grass industry. This is China's definition of the field it researches, and reports, in journals such as *Acta Prataculturae Sinica*. The grass industry is new to China, generating a lot of pratacultural research.

Unfortunately, grass industry researchers do opt for the form of the Marxist dialectic, positing inherently contradictory relations between two phenomena, thus generating a problematic that cries out for scientific solution. This crudely reductionist dialectic takes the form of an axiom: there is a contradiction between grass and animals. Thus grazing is inherently problematic.

All this means is the superficially plausible observation that, at any given moment, the more animals you have, the less is the biomass of grass; and conversely, the fewer the animals, the more is the grass. If that trite observation is all one needs to know about grasslands, then none of the pastoral economies worldwide can legitimately exist, all are inherently degrading. Further, the wild herds of antelopes and gazelles that also graze the Tibetan Plateau are also degrading the grasslands.

Herders deal with this momentary zero/sum, of grass versus animals, by moving on, to allow grasses to regrow. Skilful pastoralists never graze their animals in one place so long that the grasses die, they always move. That is the foundational strategy of sustainable pastoral production landscapes.

China deals with the zero/sum of grass versus animals with alarm, that steadily grows, until drastic policies are called for. The more the grasslands are observed, the greater the problem becomes. Since the purpose of all grassland science is grass industry, the industrial future, of making the grasslands more like the familiar croplands, is threatened. Starting from the contradiction between grass and animals, a problem has been invented that can only worsen, and demands the intervention of a strong state with capacity to reach deep into the lives of herders who persist in ignoring the contradiction. This is a self-fulfilling momentum, with its own logic, inevitably resulting in crisis.

This logic is based on the fallacy of contradiction. The fallacy is so foundational to China's pratacultural science that it negates not only the pastoral grazing of domestic yaks, sheep and goats, but also negates the role of wild herds too. If domestic herds degrade, by chewing grass, so too must the wild herds. This is ignored by China's policy approach, which in public emphasises the need to build up the size of wild herds, since they were much reduced in numbers in recent decades. This is a striking omission, not only because it fails to account for the grazing of wild animals today, and in the recent past when their numbers were much greater, but it also denies the role of wild animals, long before any human presence, in creating the grasslands. This is a profound misunderstanding. The grasslands of the Tibetan Plateau –like most grasslands around the world- evolved with wild grazing herds. They evolved together, adapting to each other, shifting their patterns of growth in close relationship. That is a major reason why grasslands exist at all.

HOOFED BIODIVERSITY: TIBET WILD

Early European explorers on the Tibetan Plateau consistently reported huge migratory herds of grazing antelopes and gazelles and many smaller mammals feasting on the alpine meadows. These were regarded as fair game, not only during the revolutionary decades but well into this century, with officials, and military personnel garrisoned in every town across the Tibetan Plateau, continuing to consider wild species as a welcome opportunity for fresh protein. The isolation of Tibet from the world, both before and after 1950, has prevented comparative research of herd sizes, and

the extent of wild herbivore grazing pressure on regulating grass growth. China's scientists, stuck in the assumption that all grazing is degradation, have not sought to research the extent of this ongoing loss, now further compounded by widespread fencing that impedes wildlife migrations.

Of the research done by Chinese scientists, much focuses on the dangers of transmission to humans of diseases carried by animals, and much is reported in journals not concerned with conservation, such as China's *Journal of Economic Animal*.[170] Some Chinese scientists go so far as to suggest one cause of grassland degradation is trampling by native wild mammals, including the indigenous wild ass, yak and gazelles. [171]

However, recent researches "indicate an overall growth in the population of Przewalski's gazelle since 2003, although some subpopulations have declined or been extirpated. In spite of conservation efforts Przewalski's gazelle is still threatened by habitat degradation and loss, habitat fragmentation, fencing, intensified competition with domestic livestock and predation. Further growth of this gazelle population is constrained by limited habitat availability and human-gazelle conflict."[172]

Advances in genetics make it possible to map the severity of human predation on rare species such as the Tibetan gazelle *procapra przewalski*. Scientists state that "Demographic analyses indicated that Przewalski's gazelle experienced genetic bottleneck and severe population decline, with the ancestral effective population size reducing to less than one percent."[173]

If one weighs the total biomass of wild animals, and compares it to the total biomass of domestic herds, in Tibet, even in the Changtang protected area, wild biomass is no more than seven per cent of the domestic biomass, and at Qinghai lake much less.[174]

While Chinese scientists often highlight climate change as a reason for the steep decline of wild animals, the major reason is a rise in human presence beyond what was reasonable for both people and animals. One recent genetic study of the endangered Przewalski's gazelle, endemic to the Tibetan Plateau, concludes: "the population decline of Przewalski's gazelle was probably tied to the development of human civilization in the study area. For one thing, the population decline of the gazelle may be associated with the expansion of human colonization. Human colonization began to increase in this area during the Han Dynasty (1,800 to 2,200 years ago), then colonization particularly accelerated since the Qing Dynasty (360 years ago), with a more than tenfold increase of human population size. We can see that, approximately at the time when human colonization accelerated, the gazelle population began to significantly decrease."[175]

The revolutionary war on nature is more specifically identified as the cause of sharp decline in other recent research findings: *"Przewalski's gazelle was once widespread in the west of China. But from the 1950s onwards the species underwent significant declines and became confined to isolated patches around Qinghai Lake. In 1986 the total population size was ≤350 and it was considered the most threatened antelope species by Mallon & Kingswood (2001). Research and conservation efforts for Przewalski's gazelle since the 1990s resulted in an increase in the population,*

170 Teng LiWei, Liu Xu and Liu ZhenSheng; Parasite infections in Tibetan antelope [Pantholops*hodgsonii*]. Journal of Economic Animal, 17 #2, 2013, 63-66

171 Cui QingHu, Jiang ZhiMing, Liu JiKe and Su JianPing; Discussion on causes for grassland degradation on Qinghai-Tibet Plateau. Pratacultural Science; 24 #5, 2007, 20-26

172 Li ChunLin; Jiang ZhiGang; Ping XiaoGe; Cai Jing; You ZhangQiang, Li ChunWang, Wu YongLin; Current status and conservation of the Endangered Przewalski's gazelle Procapra przewalskii, endemic to the Qinghai-Tibetan Plateau, China; Oryx, 46 #1, 2012, 145-153

173 Yang Ji and Jiang ZhiGang; Genetic diversity, population genetic structure and demographic history of Przewalski's gazelle (*Procapra przewalskii*): implications for conservation; Conservation genetics, 12 #6, 2011, 1457-1468

174 Joel Berger, BayarbaatarBuuveibaatar and CharuduttMishra ;Globalization of the Cashmere Market and the Decline of Large Mammals in Central Asia, Conservation Biology, 27 #4, 2013, 679-689

175 Ji Yang and Zhigang Jiang; Genetic diversity, population genetic structure and demographic history of Przewalski's gazelle (Procapra przewalskii): implications for conservation; Conservation Genetics, 12 #6, 2012, 1457-1468

which was estimated to be 602 in 2003. This gazelle species is, however, still threatened and the human population and accompanying domestic livestock are increasing around Qinghai Lake."[176]

While such hunting is now officially discouraged, Schaller repeatedly found local officials encouraging and participating in illegal hunting, and pastoralists, even within the Changtang nature reserve, have been instructed to fence their allocated lands, which makes hunting much easier: *"Although the fences present some danger to large herbivores that become entangled in the wires, benefits to hunting are also becoming apparent. Herds of wild ungulates can be easily tired by chasing with motorcycles, and the new fences are being used to block their escape and make killing easier. Within the past 3 years reports have come to light of local hunting of antelopes with motorcycles in several northern townships of Gertse County, including within the Aru Basin, and similar recent incidences are known from further east in the Chang Tang (WWF China-Tibet Program, 2006). Results of such chasing, or natural occurrences of herds running into fences, are now observable inside the Reserve."*[177]

MINING AND LAND RIGHTS IN TIBET

Mining and land rights of communities directly affected by mining are fraught topics worldwide, at a time when resource extraction companies are pushing ever deeper into remote areas in their insatiable quest for minerals and energy.

In Tibet, a proliferation of mining, from medium to world scale, encroaches and disrupts community life in many areas all over the Tibetan Plateau, since Tibet is rich in minerals. There have been many protests against mining despoiling localities which until recently had been able to live traditionally, which also means caring for sacred mountains and lakes, and the pilgrimage circuits which regularly bring people from afar to do the practices of mental purification as an active meditation done on foot.

In addition to the direct impacts of mining on local Tibetan communities, mining also generates much climate warming emissions, to be legitimised and offset by closing pastures and banning of grazing. Most of the area of China designated as "restricted development zone" is in Tibet, including the richest grazing lands of the plateau. If such lands are now, under PES and REDD+ designated solely as watershed protection and carbon sequestration zones, then Tibetans will be denied the right to development, as will their children and grandchildren, as carbon sequestration contracts become a new kind of legal property that will increasingly override traditional property rights. In the name of Payment for Environmental Services, Tibetans will be paid by China, which in turn is paid by global treaty arrangements, to sit and do nothing, excluded from their land, with no prospects other than migrating to distant factory cities, while their land sits idle, growing grass which is counted as successful carbon capture. This depopulated land will be designated a long term guarantee of pure water supply services to distant downstream users, at the opportunity cost to Tibetans of foregoing any development for the coming century, or even remaining in traditional mode of production on ancestral land.

The actuality of intensive mining of the rich Tibetan endowment of mineral wealth is concealed from the wider world, and the rest of China, not only by travel restrictions, censorship and the absence of much mining from official statistics; but also through an elaborate rhetoric which incorporates the active mines into "zones of restricted development", around which "red lines" have been firmly drawn at the highest level, in order to protect "ecological environment" by banning almost all human activity, including the customary land use of the Tibetan pastoralists. This contemporary green governance discourse not only masks the exclusion of nomads from their pastures, it proclaims them to be

176 Chunlin Li ,Zhigang Jiang , Xiaoge Ping , Jing Cai , Zhangqiang You, Chunwang Li and Yonglin Wu; Current status and conservation of the Endangered Przewalski's gazelle Procapra przewalskii, endemic to the Qinghai–Tibetan Plateau, China; Oryx; 46 #1, 2012, 145-153

177 Joseph L. Fox, Kelsang Dhondup and Tsechoe Dorji; Tibetan antelope Pantholops hodgsonii conservation and new rangeland management policies in the western Chang Tang Nature Reserve, Tibet: is fencing creating an impasse? Oryx, 43 #2, 2009, 183-190

voluntary "ecological migrants" who choose, for the greater good, to leave their lands so they will recover without human activity, from overgrazing, degradation and even desertification. In the name of China's global environmental citizenship, these depopulated lands, on paper off-limits to grazing and most definitely excluding intensive resource extraction enclaves, certify China as a responsible contributor to the global necessity of adapting to climate change by sequestering more carbon, protecting "fragile" watersheds, and rehabilitating degraded lands. China thus qualifies for not only global approbation from environmentalists but also concessions, in climate treaty negotiations, allowing China's industrialisation and massive coal consumption to persist. As market-based global trading mechanisms that ostensibly reduce emissions caused by deforestation and degradation (REDD), China may attract investment for these "restricted development zones", which will relieve China of the burden of paying subsistence rations to displaced nomads to sit and do nothing, on the urban fringes of their former pastures. Similarly, as the concept of Payment for Environmental Services becomes increasingly operational, China can rebadge its practice of reducing pastoralists to utter dependence on state rations, as PES, yet again showing the world that China participates in the latest fashions in governance, is a good global citizen, even a model for the rest of the developing world to emulate.

WASTED LIVES

Meanwhile, on the ground, the displaced pastoralists, not long ago proudly independent and active agents of productive and sustainable land management, are reduced to dependence, passivity and irrelevance. They sum up their circumstances, the anthropologists tell us, by saying they have become like penned animals themselves. Yet, on the pastures from which they are increasingly excluded, the miners move in, often at the initiative of the same local governments that also bear responsibility for environmental regulation and implementation of the nationally mandated program of *tuimu huancao*, closing pastures to grow more grass.[178]

In the new settlements, in concrete housing, cold in winter and hot in summer, in the straight lines of modernity, almost always lacking in vocational training for any new way of life, they lead wasted lives. As sociologist Zygmunt Bauman says: *"In a society of producers, they are the people whose labour cannot be usefully deployed since all the goods that the existing and prospective demand is able to absorb may be produced, and produced more swiftly, profitably and 'economically', without keeping them in jobs. Being but a sideline of economic progress, the production of human waste has all the markings of an impersonal, purely technical issue. The principal actors in the drama are 'terms of trade', 'market demands', competitive pressures', 'productivity' or 'efficiency' requirements, all covering up or explicitly denying and connections with the intentions, will, decisions and actions of real humans with names."*[179]

To the world, which has no access to the grasslands, this is presented as part of China's drive to repair past mistaken productivist zeal to convert sloping land to agriculture, and to reverse excessive deforestation, land degradation and river catchment erosion. The world applauds, unaware of ground truth. It appears on paper that China is making great strides. Of the declared "red line restricted development zones" in China, more than half the area is on the Tibetan Plateau.

The great danger is that the exclusion of Tibetan farmers from valleys now allocated to hydro dam construction, and nomads from pasturelands, is not a temporary strategy to achieve remediation, it is a permanent exclusion, which will be enforceable not only by state decree but by the legal contractual obligations inherent in REDD, PES and in what China blandly calls "grain-to-green" programs, all of which necessitate the restriction or full exclusion of traditional farming and grazing, not only for the present generation, but for generations to come. For example, the emerging regulatory regime covering carbon sequestration imposes on traditional land managers the contractual obligation to grow more biomass by restricting customary agriculture or pasturing for at least one century, and this is written into the formal contracts that then have market value, and are purchased by factories in far distant countries

178 Gabriel Lafitte, Spoiling Tibet: China and resource nationalism on the roof of the world, Zed Books, 2013

179 Zygmunt Bauman, Wasted lives: Modernity and its outcasts, Polity, 2004, 39-40

to offset their ongoing pollution. Once signed, these contracts effectively prohibit traditional land use for the children, grandchildren and great grandchildren yet to be born, as well as the current generation. This effectively ends any prospect that the great grasslands of the Tibetan Plateau have a future, or opportunity to develop, based on growing the traditional livestock raising productivity. The right to development is thus denied. None of this has been explained to the nomads, who often choose to take up official inducements to move to new concrete housing on urban fringes, in the expectation that the move is temporary, reversible and negotiable, allowing a return of some or all family members to their customary lands to continue herding. Needless to say, none of the long term implications of this profound long term repurposing of land use has been explained to the nomads now leaving their land, nor has prior informed consent been obtained.

It would be far too simplistic to suggest that China has a grand strategy to displace the nomads of the Tibetan Plateau and Inner Mongolia (and elsewhere), based on an elaborate fiction of global green governance. Far from a calculated plan, the gradual emergence of the current situation has been traced in earlier chapters. The history of successive policies for China's great grasslands needs careful tracking, to see how the "tragedy of the commons" discourse came to dominate.

The nomads of Tibet, when given rare opportunity to voice their perception of issues such as degradation of the rangelands, have a very different view to the official scientists and official policy makers. To the nomads, maintaining a sustainable grazing economy that is both productive and cares for the land and biodiversity, is not difficult, as long as restrictions on mobility are lifted. They see no contradiction between grass and animals, as if the situation by definition is zero/sum.

We hear so seldom from Tibetan voices. The nomads are especially absent from the debate *about* them. Yet on the few, but growing, opportunities for these subalterns to speak, they express puzzlement that the most abundant pasture lands of the Tibetan Plateau are now designated, from afar, as "degraded." Anthropologists in their fieldwork in Tibet mostly encounter among Tibetans astonishment that their pastures are considered degraded.

Are these close observers too close, or too closed-minded, to see the grass from the black beach? The pasture lands are their home, their land, their livelihood, their greatest joy and danger, their endowment, dowry, security, capital and until recently their world. They see themselves as gatherers of what nature provides, Sahlins' leisure society, with few costs to be sunk into their enterprise. Li Wenjun and Gonpo Tsering note: *"Some economists have criticised the assertion of lower production costs in traditional pastoralism, pointing out that this calculation is due to the 'free' use of rangeland resources. A more important question perhaps is whether or not the concept of consumption from classical economics is appropriate for understanding pastoralist systems: the interaction between grassland and livestock is a co-evolved and co-adapting relationship, not a relationship of consumer and consumed. Pastoralism is a coupled system in which livestock grazing facilitates ecological processes in the grassland ecosystem."*[180] Sahlins put it more poetically: *"There is also a Zen road to affluence, which states that human material wants are finite and few, and technical means unchanging but on the whole adequate. Adopting the Zen strategy, a people can enjoy an unparalleled material plenty - with a low standard of living."*[181]

A DIALECTIC OF GRASS AND ANIMALS

State science, and the policies that stem from alarming scientific reports that as much as 90 per cent of the rangelands are degraded, are based on the foundational proposition that "there is a contradiction between grass and animals." That formulation, phrased as a dialectic that demands a decisive solution, is found repeatedly in the basic assumptions of Chinese science on the grasslands. This denies that a grazing economyis possible, in which the long

180 Li Wenjun and Gonpo Tsering; Pastoralism: Custodian of China's grasslands, International Institute for Environment and Development, Briefing, April 2013, http://pubs.iied.org/10042IIED.html

181 Marshall Sahlins, The original affluent society, Aldine, 1972 http://www.primitivism.com/original-affluent.htm

term survival of a healthy sward, and animal production. This crude formulation insists that the more animals you have, the less is the grass; and conversely, the fewer the number of grazing domestic animals, the more is the grass biomass. If this were true, then the grazing societies that have existed all over the world for thousands of years are all impossible. The corollary of this crude dialectic is that the benchmark for defining what constitutes degradation is anything less than the weight of biomass of grassland on which no grazing occurs at all. **Thus any grazing, no matter how skilfully managed, is degradation**. The goal of policy is now to restore pristine grassland wilderness, which, like rainforest, is in equilibrium only if humans are excluded.

Rangeland scientists around the world have been engaged with Chinese scientists, as have international anthropologists and other social scientists. This has generated widely divergent views, so divergent it seems they are looking at different landscapes. As anthropologist and geographer Emily Yeh perceptively notes: *"severe and pervasive degradation on China's rangelands has become a kind of 'received wisdom', a narrative that blames local people for environmental degradation in the absence of adequate evidence, which is often used to justify certain interventions, and which is repeated so many times that it becomes common sense within certain scientific and policy communities. Discussing the 'theory of Himalayan environmental degradation', Blaikie and Muldavin trace the reproduction of perceived wisdom in China to disjunctures between epistemic communities of social and natural scientists, as well as between those working within the Chinese national context and other national contexts, who 'write and read for different journals, speak different languages', have different conceptualizations of sound research and effectively see different landscapes. Also examining the disjunctures between different epistemic communities, Williams argues that international, national and local scales of natural scientific practice work together to privilege non-local representations of nature, and that grassland science in Inner Mongolia ultimately functions to reproduce unequal social relations. Remarking on a different epistemic divide, Xu Jun (2010) makes an oblique reference to the highly politicized nature of resettlement policies implemented to remedy degradation. She notes, 'western scholars are arguing about the various reasons or goals of China's central government's [policies, while] most Chinese scholars are paying more attention to the harsh living conditions of eco-immigrants', a statement that points to the fraught politics of framing questions about rangeland management in China."*[182]

In these ways**, industrial modernity is thrusting into remote communities**, without any payment of royalties to those communities, investment in local education or health facilities, or training or local employment, or subcontracting of local supply to local communities. This is a familiar story worldwide, in indigenous communities unable to defend themselves effectively, even when they risk, and lose, their lives.

IMPOVERISHMENT OF THE RANGELAND DWELLERS

Can this scenario be called violence? Compared to the screaming mothers we see daily on TV news, as bombs or heavy equipment trash their village homes, clearly not. Yet the present moment on the rangeland has a wider context. If we look at the consistent trend of official policy and its implementation over several decades, it is clear what is the overall direction.

Since the state largely withdrew from the rangelands around 1980, with the collapse of the livestock production brigades and communes, the state has gradually returned, each time encroaching further on pastoralists choices; further limiting mobility; further allocating fixed, fenced, demarcated lands; further restricting herd size and family size; further demanding that children be removed to distant boarding schools to be inculcated with the nation building ideology of the state. While there have been many policy announcements since the 1980s, they have had a consistent outcome, of making the pastoralists poorer, with fewer animals, less mobility, less land, more costs of production such as compulsory fencing, compulsory winter house construction, compulsory construction of winter herd shelters, compulsory fencing, ploughing, sowing and harvesting of fodder crops.

182 Emily T. Yeh (2013) The politics of conservation in contemporary rural China, The Journal of Peasant Studies, 40:6, 1165-1188, 1176

Some of these policies, in isolation, were well-meant, as ways of improving productivity, increasing the overwintering herd survival rate. But the cumulative effect was to shrink that land available for grazing, shrink herd size to or below subsistence survival level, and the result was overgrazing due to restrictions on nomadic mobility. These unintended outcomes of poorly planned policies in turn led to further restrictions, which invariably blamed overgrazing on nomad ignorance and indifference to grasslands that have always been the foundation of their entire way of life. This succession of state failures impoverished and immiserised the herders, while consistently blaming them for the negative outcomes, especially land degradation.

A NEW MASTER NARRATIVE IS INVENTED

At the same time, in Qinghai province, senior cadres sought ways of attracting Beijing's attention, and central financing. Qinghai, as a province, was created to separate the Tibetans and the Mongols, so its foundational mythos is that it is not really part of Tibet, even though it is topographically the northern half of the Tibetan Plateau and until quite recently populated mostly by Tibetans. In the 1950s and 1960s Qinghai served clear national purposes, for which it did receive central finance, for its role as a chain of prison camps for the regime's enemies, and as part of the Third Front of military industrialisation, in preparation for the world war Mao expected. But by the late 1970s both of these sources of central finance dried up, and Qinghai was left behind, as coastal China surged ahead under Deng Xiaoping's "opening up."

The only ongoing opportunity for tapping into central fiscal largesse was dam building, capturing the waters of the Yellow River for hydro power to supply the fast industrialising cities of Xining, Qinghai's capital, and, further downriver, Lanzhou, the capital of Gansu province. The Ministry of Water Resources grew in power in Qinghai, coming up with a winning slogan: "Qinghai is China's number one water tower." This became the key to winning more central money.

This slogan, repeated at every opportunity, gradually expanded to become "Tibet is China's number one water tower" and even "Tibet is Asia's water tower." In the minds of central leaders the nomads of Qinghai, and the entire Tibetan Plateau, seemed to produce very little that was sent to market, while water downstream became increasingly scarce. As access to upstream water became more important, the unruly, unproductive, over-grazing herders became more marginal. By the late 1990s, at the highest level, it seemed a decisive choice was required, an either/or, zero/sum decision that firmly set the course for the long term future, to be implemented gradually, if only to avoid any repetition of the war of the late 1950s, in Qinghai's pastoral areas, once the nomads discovered they were to be communised, losing all control and ownership of lands, herds and even personal property. It is only very recently that violence of "peaceful liberation" has been adequately documented.[183]

WHAT NEXT FOR CHINA'S GRASSLANDS?

This is the wider context in which the present moment sits. The trend is towards further enclosure and exclusion, towards declaring the pastoralist mode of production irrelevant to China's brand-new urban future; while guaranteed access to upriver water sources in Tibet is increasingly crucial. The currently intermittent enforcement of the tuimu huancao policy of closing pastures to grow more grass may well intensify. Although China publicly denies there was a war on the grasslands, and that "liberation" was "peaceful", in the memoirs published by retired military officers, and in the official county records and gazetteers, the memory persists of the extreme violence needed to quell nomads facing catastrophic loss of agency. Everything points to a brand-new Tibetan countryside, in which pastoral livestock production, at best, continues only to raise animals until they are adult, whereupon they will be taken

183 Li Jianglin, When the Iron Bird flies in the Sky, Linking Publications, Taipei, 2012 Li Jianglin 2009 Do We Understand Tibet More than the Westerners? (Women bi xifang dui Xizang gengliaojie ma?). Online access at http://www.renyurenquan.org/ryrq_article.adp?article_id=1151

to peri-urban feedlots for fattening and slaughter. Livestock production on the range will be banned altogether in the red line restricted development zones, in the name of China's contribution to climate change adaptation and land rehabilitation, winning for China sufficient credit for taking climate action, thus allowing the world's factory to continue to raise emissions.

It is in this wider picture that we can consider the present moment as violence, seldom overt, but pastoralists required to relocate to urban settlements understand quite clearly they cannot refuse.[184] Violence is structural, in this situation, in the power of the state to not only dispose of land rights, cancel land tenure certificates, and remove people, but also in the prejudicial depiction of those classified only as "herders" as an itinerant rural labour force of low human quality, little awareness or care for the consequences of their actions, occupying enormous territories for little purpose. It is the state that authors the master narrative, or dominant discourse, that marginalises the pastoralists; and assigns the construction of a new China to the party-state. This is systemic violence, steadily marginalising and impoverishing people, to the point where they have no option but to leave their degraded land.

The state is in no hurry to fully depopulate the "restricted development zones" of the Sanjiangyuan Three River Source Protected Area. There is little effective opposition, and the creation of a semi-urban underclass of welfare dependants is a burden on national and county finances.

There is an inexorable logic to urbanization, the concentration of services in centralised spaces, to which everyone is centripetally drawn. This concentration is always justified by the market logic of efficiency in locating facilities in the best endowed places, the corollary being that remote, scattered, extensive land users can never expect modern services, as the cost of extending them to remote areas can never be justified. For anything beyond the increasingly irrelevant practice of livestock rearing, the rural hinterland is by definition inefficient, lacking in scale and concentration, forever doomed to fall further behind the new cities of new China.

THE NEW EXTENSIFICATION MOVEMENT

China is at odds with the world trend. Currently, under UN auspices, all major sectors and social forces, from big business to small NGOs, from indigenous communities to states, are engaged in defining Sustainable Development Goals (SDGs) that will replace the Millennium Development Goals that expire in 2015. One major issue in this debate, and emergent consensus, is the future of the world's farmlands and pastures. In March 2014 the Farmers Major Group in this UN process announced its priorities for the next global SDG commitments, to be adopted by all states. Their top goal is poverty eradication, to be achieved by farmers and pastoralists not only continuing to use their land but also to gain "universal access to resources (land, water, seeds, credit, infrastructure)."

The second priority for the world's agriculture is food security, nutrition and sustainable agriculture systems. This UN position paper calls for: *"the promotion of agricultural extensification instead of intensification,"* and for *"adoption of food sovereignty as policy framework –farmers and their countries must be free to make agricultural policy decisions that best benefit them."*[185]

China is moving in the opposite direction, towards *intensification* that concentrates food production in enclaves on urban edges, while depopulating huge areas that have been managed both sustainably and productively for millennia. China is reducing Tibetan food security, generating reliance on distant sources for even basic foodstuffs, despite a long history of Tibetan self-reliance. At a time when food insecurity is a worldwide concern, exacerbated by China's large-scale purchases of agricultural land in Africa, for monoculture crops to export to China for animal feed, China is deliberately undermining food security in Tibet. The loss of food security in Tibet is currently an issue that has

184 "No One Has the Liberty to Refuse": Tibetan Herders Forcibly Relocated in Gansu, Qinghai, Sichuan, and the Tibet Autonomous Region, Human Rights Watch, June 2007, 80p

185 www.sustainabledevelopment.un.org/getWSDoc.php?id=4142

attracted little attention, yet the pastoral regions of the Tibetan Plateau are actually one percent of the inhabited land area of the planet, and a loss of one per cent at a time of food insecurity and consequent poverty is a very backward step.

Extensification is a key concept. Throughout the 1990s, the European Community pushed for extensification, which deliberately seeks to make use of all land suited to food production and environmental protection, together, rather than have former agricultural land shrink as intensification of production also intensifies pollution, and leaves much land uncared for. Tibet's traditional land use is extensive, with pastoralism actively pursued in almost all vegetated areas. China has assumed that extensive land use is a vestige of a less productive age, and that intensification, located in places of the greatest factor endowment, is the direction to go. This makes most of the Tibetan Plateau redundant.

Claude Beranger, research director of France's National Institute of Agronomic Research sums up the resurgence in extensification, pointing out that extensification results in lower output per unit of area, while productively occupying agricultural land that otherwise would be abandoned. By accepting less output per hectare, without lessening total production, fewer expensive and environmentally damaging inputs are required, reducing environmental impacts. Extensified agriculture has been designed, in Europe, to include specific biodiversity conservation actions by the farmers, who qualify for assistance under Europe's Common Agricultural Policy by acting to benefit the environment while maintaining extensive food production. This restores ecosystems and landscapes, through the active engagement of farmers, on land they know best, taking initiatives to preserve and protect water quality.

Beranger says: *"Extensive farming or production systems can be more beneficial for the ecological environment than intensive systems. They require fewer chemical inputs and thereby minimise the risks of land and water pollution. They also utilise more surface area for most types of production and thus avoid fallowing or abandoning of land, and land degradation by soil erosion."*[186]

WINNERS AND LOSERS

There is much in this report that has not been discussed before, revealing a tragedy gradually unfolding across Tibet. The wider world, lulled by China's discourse of environmental good citizenship, fails to discern the crippling impacts on Tibetan communities which have a 9000-year history of sustainably managing a pastoral grazing economy.

China is doubly advantaged by the situation in Tibet; and the Tibetans doubly disadvantaged. At a national and international level China represents itself a an exemplary global citizen, protecting fragile ecosystems with firm red lines that prohibit human activity so as to capture carbon, rehabilitate degraded lands and protect watersheds. At a subnational level Chinese mining companies despoil Tibet with growing intensity and environmental damage, unseen, unknown to the wider world, especially in depopulated areas where there are no longer Tibetan communities to protest these illegal encroachments. China also claims the resettlement of Tibetan pastoralists will increase their (cash) incomes, succeeding in alleviating poverty, and thus fulfilling the economic and social rights of Tibetans.

The Tibetans are doubly disadvantaged. The world understands them as "ecological migrants" who have chosen to leave behind poverty and remoteness, entering history and the modern urban job market. The reality is dependence, anomie and even despair leading to public protest suicide; while the world applauds China's commitment to PES, REDD, carbon capture etc. of the recent wave of protest suicides in Tibet, 22 were nomads. In reality Tibet loses self-sufficiency in producing even the most staple of foods, deepening dependence on China and exacerbating food insecurity. Grazing bans Tibetans were told would be for a few years now turn out to be permanent, depopulating huge areas, often the best pasturelands of the plateau, creating space for miners to move in, resulting in further degradation.

186 C Beranger, Sustainable Agriculture: Extensive systems and extensification, www.infrc.org.jp/english/KNF_Data_Base_Web/PDF%20KNF%20Conf%20Data/C4-3-117.pdf

HERDING PEOPLE

But in China, there are differences. The People's Republic of China asserts ownership of not only all subsurface minerals, but also of the land surface, an extreme form of modernity. China, having taken possession of Tibet with great violence in the 1950s, asserts a legal monopoly on land ownership, except for urban land, which is tradable. Rural land users can, at best, be granted a certificate of land tenure, (*caoyuanshiyongzheng* in Chinese) which can at any time be revoked. Since 1980 it has been government policy that peasant farmers should feel secure that the land is theirs, and will never again be seized, to make way for communes, as happened in the late 1950s through to 1978. Security of tenure remains until now a key policy of the ruling Communist Party, in order to motivate farmers to care for their land. A recent report by a Tibetan postgraduate researcher, Huatse Gyal, says*: "In this certification, the data of the geographical range of the summer and winter pastureland, size, and lease years of each household was documented along with the head of household's name. For lower administrative public services, this certification served as evidence of land and family registration."*[187]

However the Communist Party is now seriously considering making rural land tradable, as an asset class to be bought and sold, which inevitably will dispossess the poor and enable the rich to accumulate and amalgamate their land holdings, as happens worldwide.

The issuing of long term land tenure certificates for farmers also extended, around 1990, to the nomadic pastoralist land users of the Tibetan Plateau. However, subsequent policy shifts have seen those promises of long term security of tenure broken, their land use certificates cancelled, and hundreds of thousands of pastoralists removed from their pastures, especially in the most productive pasture lands of eastern Tibet, the source area of three of Asia's greatest rivers: the Yellow, Yangtze, and Mekong Rivers. In the name of watershed conservation, grazing bans and exclusion of nomads are occurring at an accelerating rate. In some cases, the grazing ban is nominally a scientific experiment in growing more grass, for a specified trial period of 3 or 5 or 10 years, after which grazing may resume. In practice, although this policy has been in operation since 2003, people are not officially allowed to return, though many do so unofficially. Often their land tenure documents are cancelled, in other areas; the former nomads retain their land use rights, though not allowed to exercise them. Recent anthropological fieldwork shows the dispossessed ex-nomads reduced to dependence on state rations, acutely vulnerable to destitution, living, as they now say, "'like penned animals." Those who used to herd animals find themselves now herded like animals.

In the dryland pastures, when officials have been unable to find suitable alternative areas nearby for resettlement, the pastoralists have been required to move hundreds of kilometres, to the outskirts of Golmud, a Chinese petrochemical industry city on the northern Tibetan Plateau, where Tibetans have almost no employment. Huatse Gyal's fieldwork report from eastern Tibet states: *"Migration for ecological reasons can be divided into two kinds: 'entire village migration', which requires a '100% depopulation', and 'partial migration', which decreases grazing pressure by the migration of only a portion of the villagers. For example, the migration project of Qinghai province implemented an entire village migration policy in Maduo County, located on the riverhead of the Yellow River, and in Chumalai County, located on the riverhead of the Yangtze River. In both of these cases, all of the village members had been relocated to a migrant village, such as Golmud city, which is several hundred kilometres away from their homeland. Before resettling in the migrant village, they needed to sell all the livestock they owned."*[188]

The extensive lands they used sustainably and productively for thousands of years do not long remain depopulated. Now that there are no local communities on the land to defend it, miners move in, even where the land is officially designated as a protected area or nature reserve. Recent visitors to Tibet, including Chinese and international scientists, social scientists and tourists, as well as Tibetans in regular communication with the wider world, all report

187 Huatse Gyal, Migration for Ecological Preservation? :Tibetan Herders' Decision-Making Process Regarding the Eco-Migration Policy in Golok, Reed College, 2013

188 Huatse Gyal, Migration for Ecological Preservation, 2

a proliferation of mining in the depopulated areas, in utter contradiction of the official goal of watershed conservation and the key slogan, *tuimu huancao*, closing pasture to grow the grassland.

LAND TENURE RIGHTS

In addition to the urban land owners, the peasant farmers of China, and the pastoralists, there is another population in many areas across China, whose land rights situation is a special case. These are the forest dwellers, or villagers close to forests. China has lost nearly all of its forested area, and in recent decades central leaders committed to greatly expanding forest. Initially, the reforestation strategy excluded local communities, fence the reforestation area, and make illegal any local gathering of forest products. As in so many other areas worldwide, this policy failed, with locals feeling the forest is no longer theirs, and is open to illegal woodcutting, gathering and poaching. The Kumaon forests of the Preface are one such example. More recently, with much encouragement from international NGOs, the community forestry approach is being used, which means the granting of land use rights to local communities, as the stewards and guardians of their forests. In China land tenure is rapidly being restored in the forest lands, and taken away in the grasslands.[189]

The overall picture is thus contradictory. Forest villagers are steadily increasing their land tenure security; while the pastoralists of the Tibetan (and Inner Mongolian) grasslands are steadily losing their land tenure rights. And all rural land users now face the prospect of their land becoming a tradable commodity, in circumstances favouring the rich against the poor, who are unable to borrow money to buy land. Not only are Tibetan pastoralists losing land security at a time when others are gaining it, they gain nothing from the miners who move in.

The role of the state is crucial, since it asserts sole legal ownership of rural land, and may dispose of it as it chooses. The multiple and contradictory roles of the state, at local, regional and national levels, are to be examined.

In many areas worldwide, where mining encroaches on indigenous land with impunity, it is private enterprise, often corruptly paying off local officials to look the other way. In China, this too does happen, but most of the mining, especially the larger mines, is state owned, either at local or higher levels. This is quite unusual, quite different to global experience. This makes it impossible for local communities to find anyone willing to listen to their protests. Local authorities rely on the mines they operate, and on selling rural land for urban expansion, as primary revenue sources, both for personal enrichment, and to finance their official budgets, especially in poor areas, where there are few other sources of revenue, and little support from higher levels of government. Further, the higher levels require local governments to stifle all protest, and cadre career promotion opportunities are directly tied to successfully quelling dissent at a local level, so it does not reach the ears of prefectural or provincial leaders, still less the wider world.

If China goes ahead soon with effectively privatising rural land, local governments will lose one of their primary revenue sources, in a system where the centre does little to support poor areas, while expecting local government to accept downshifted responsibility for community welfare. If local governments lose their profitable role as land brokers, they will rely, in Tibetan areas, ever more on mining as a revenue stream, as well as the rent seeking profits accumulated privately by well-connected officials.

FROM PASTORAL PRODUCTION TO RESOURCE EXTRACTION

Thus, in Tibet, the question of mining and land rights extends far beyond the immediate environs of the mine. Mining companies have often sought a minimal definition of their impact on land use, restricting it to land holders most immediately impacted, with compensation provided only to those who directly lose their land.

189 Forest Tenure Reform In China: Results And Lessons From The Eu-Sfa-Fao China Forest Tenure Project, UN Food & Agriculture Organisation, 2013, http://www.fao.org/docrep/018/mi285e/mi285e.pdf

In Tibet, mining has serious downstream impacts affecting the one billion people across Asia who daily drink Tibetan water. Mining utterly changes the land use pattern, from extensive to intensive, from mobile to stationary, from a use economy to an exchange economy, from local production and consumption, to global integration. Intensive land use is unsuitable for the special circumstances of a high plateau where remediation of degraded land is extremely difficult, due to the climate. Intensive land use, in mining enclaves, makes other land uses, such as mobile, extensive pastoralism, seem unproductive and not worth investing in. The entire landscape is thus transformed. Only enclaves of extraction are considered productive, all else is seen as a degrading hinterland of scattered folk who can never be reached by modern, urban-based services such as electricity, schooling and urban comfort. It is sometimes said that mining and local or indigenous communities can co-exist, but this has not been true in Tibet.

Tibet faces multiple challenges that encroach on customary land use. Land is sequestered for nature reserves, on paper proving China's commitment to biodiversity conservation, desertification control and carbon sequestration. In practice mining proliferates unchecked. Land is also taken for urban expansion, and for intensive market gardens and livestock feedlots on the urban fringes, which often exhaust or pollute the land. Land is lost for hydro dams, for highways and railways, and these corridors are especially prone to erosion due to temperature change induced by highway sealing, accelerating permafrost melt. The shrinking of permafrost has led to sinking of water tables, drying of wetlands and crop failures; while climate change is also now leading to expansion of the many lakes of Tibet, with further encroachment on grazing land. Rich Chinese build their luxury villas at scenic spots, including the shores of the biggest of Tibetan lakes, Tso Ngonpo, further excluding traditional land users.

Above all, the compulsory fencing of Tibet has severely restricted the customary mobile pastoralism that enabled Tibetan nomads to sustainably mange the vast pasture land for at least 9000 years. Mandatory fencing hems livestock, wildlife and herders in, reduces mobility, intensifies local impacts, degrades the living turf, and results in degradation.

On top of these insults to the land, mining literally chews the land. The most widespread mode of mining has been the extraction of alluvial gold from the riverbeds that meander across a great plateau. Mining is done by assembling dredges that sit in riverbeds, scooping up river stones, river banks and water, to be swirled inside the machine, then spat out the far end, retaining only a few flakes of gold. The slurry of mud, stone, grass and water ejected by these machines crawling along Tibetan rivers washes away, leaving bare earth or rock, in which native grasses no longer grow, even when attempts are made to sow seeds. Often the erosion that ensues is unstoppable, given the extreme cold of Tibetan winters, and the frequency of gales and blizzards that strip soil unprotected by vegetation.

China argues that the increasing intensity of mineral extraction from Tibet, now on a world scale, is merely the universal law of development worldwide. This makes mining a necessary precondition for modernity, a stage at the start of the industrial commodity chain as supplier of raw materials, as if this is a historic necessity. Tibetans reject this, and have vigorously protested the mining of their land many times, sometimes at the cost of their lives, since all Tibetan protest is quelled violently. Tibetans argue that alternative paths to development exist, not least ecotourism and pilgrimage tourism based on the unique attractions of Tibetan culture, landscapes and traditional pilgrimage circuits.

Mining increasingly alienates land, without providing local employment, improved health or education, or vocational training enabling Tibetans to gain employment in extractive industries conducted in Chinese.

The right of indigenous peoples to give or withhold their free, prior and informed consent (FPIC) in non-coercive negotiationsprior to extraction operations being established and developed on their customary lands, is widely recognised as the fundamental precondition. Tibetan communities are never consulted before mining begins. FPIC has increasingly become an international norm through legal cases, both in individual national jurisdictions and via the regional human rights systems.The regional court decisions—especially in *Saramaka v Suriname* and *Endorois* v *Kenya*—have created jurisprudence that establishes that the right to land and FPIC are inherent, regardless of

whether indigenous peoples are recognized by the state. They also confirm that decisions need to be madein line with traditional methods of decision making. The right to FPIC was established withinthe UN Human Rights system, relating primarily to ILO Convention 169 and the UNDRIP. Its application has been clarified and strengthened by, among others, the Committeeon the Elimination of All Forms of Racial Discrimination(CERD).

This is a profound reimagining of space, repurposing landscapes of extensive, mobile, productive land use into enclaves of intensive resource extraction, while declaring water to be the most precious of Tibet's resources, for the water-short North China heartland. The most productive of Tibet's pastures now are designated as zones for waters originating in Tibetan glaciers to transit the vast expanse of the plateau, en route to their destination in lowland China. Tibet's traditional economy, land use, mode of production, livelihoods and sustainable land management have all been effectively declared redundant to the requirements of a modern extractive economy.

The black yak-hair tent of nomads, Tibet, 2013

Chapter Six: Ancient Prejudices And Today's Nationbuilding Agendas

CHINA'S CIVILISING MISSION: DISCIPLINING UNRULY NOMADS

China, at its imperial centre, has long mistrusted the mobility of the nomads of its northern and western edges. Fearing for the vulnerability of peasant farmers to nomadic raids, looting and plunder, it is ingrained in central worldviews that the fluid, mobile nomads are ever a threat, the more so because their whereabouts are unknowable, since they are beyond official scrutiny, having no registered domicile that can be monitored and taxed. How to govern or at least deter the nomads has been an abiding concern for dynasty after dynasty, including even those such as the Manchu Qing who themselves were nomads who conquered China. Many of the default policy settings of today's China originate in the attitudes of the Qing, who ruled China from the mid seventeenth century to early twentieth. They were equally obsessed with how a small population of nomadic warriors from the far north could maintain control over the whole of China, and how to subdue bigger nomadic ethnicities such as the Mongols and Tibetans.

China's imperial annals emphasise the cultivation of sophisticated imperial statecraft as the primary means of keeping the nomads in check, divided against each other, in tributary submission to the imperial court, with military force the last option when diplomacy, patronage, imperial benevolence and dividing nomads against each other all had failed. The master narrative of the annals is that, as in the ancient Art of War, state violence is necessary only occasionally, when nomads suddenly congregate in vast numbers, to attack the lowlands, plundering the cities and farmlands. This foundational mythos does not correlate well with the historic records, however. Historically, China has tended to use force when it could, to extend its territories by conquest of nomadic realms. A closer look at the records, using not only Chinese but also Mongolian, Tibetan and other sources, shows that much of what Chinese court annalists depict as nomads and other barbarians paying tribute to the imperial court was more than repaid in kind, with the imperial court effectively buying off the emissaries from distant lands, with gifts to the nomads far greater than the offerings brought to the capital by the ambassadors from afar.

NOMADS AS RANDOM ATOMS

Nomadic mobility has constituted the core of the problem. As in the west, nomads are imagined to disperse and congregate anywhere and everywhere. If they can be anywhere, far beyond the gaze of the state, they can gather into a horde and descend without warning, to plunder civilisation. These are the heavily laden archetypes common to both ends of the Eurasian continent, whether in China or Europe, towards the Eurasian heartland's endless steppes and its nomads. This is where the concepts of barbarism and civilisation were born, as polar opposites and inevitable antagonists. This is perhaps the deepest of dualisms, of a logic of either/or, good and bad, right and wrong, in which one term entails the other but always opposes it, a source of chronic tension. This is clearly a construct of the civilised mind, seeking to distance itself from the barbarian.

Until the birth of communist power, Chinese central leaders always sought to manage the problematic nomadic mobility, not to end it. Only in Mongolia did China, prior to communism, seek to sedentarised the nomads and to

settle their lands with Chinese peasants. Elsewhere, such as the Kirghiz and Uighur nomadic lands of Xinjiang, and the Tibetan Plateau, there was little attempt at governance of the nomads, little interest in extending the reach of the state into the lives of nomads and their daily decision-making about their herds and livelihoods. The dynastic annalists were content with recording the ritual submission of the Uighurs, Kirghiz and Tibetans to the imperial court, creating an appearance that Beijing was at least nominally in control. But actual control was not even attempted, except in Mongolia. The Mongols were on China's doorstep, just to the north of Beijing. The northern capital had been built by the Mongol conqueror Chinggis Khan to be close to his beloved grasslands, enabling his court to winter in Beijing and summer on the steppes, with hunting aplenty. Ever since, China's capital has been only just within the intensively farmed zone, never far from the great plains and drylands of Mongolia.

SEDENTARY CHINA

In China there is a strongly teleological sense that sedentarisation is a historic necessity, the inevitable consequence of becoming civilised, or to use a classic Chinese metaphor, to become cooked and no longer a raw barbarian. "During the imperial period one's identity was defined by a fluid notion of civility, with the so-called 'barbarians' adopting a sedentary lifestyle and becoming Chinese."[190] Today, that sense of an inevitable drift of the raw to become cooked is sped up and intensified by state-building doctrines that are grounded in the classic distinction between *Xia* and *Yi; Xia* being translatable as a bundle of meanings including Chinese, central, civility and orthodoxy; while the *Yi* is a bundle connoting non-Chinese, peripheral, barbaric and heterodoxy. "Over time, the innate superiority of *Xia* civilization, it was expected, would transform different cultural and ethnic communities into a single, organic whole: what was traditionally known as a state of 'Great Unity' (*datong*) or 'All Under Heaven' (*tianxia*), and today inside the PRC, as the bounded, territorialized national subjectivity of 'Chineseness' *(Zhongguoren*) or the 'Chinese nation-race' (*Zhonghuaminzu*)."[191]

That the Tibetans must and will become *Zhonghuaminzu* is now taken as inevitable, "emphasizing the natural, long term fusion of the Chinese geo-body and its people."[192] This new doctrine is now so central, it has largely supplanted the model, taken from the Union of Soviet Socialist Republics, of legally prescribed formal autonomy for each of the officially designated minority nationalities. That model is now regarded as an impediment to the assimilationist goal of a shared national belonging, and is downplayed as much as possible, while still existing on paper, notably in the official designations of territories such as "Tibet Autonomous Region" or "Inner Mongolia Autonomous region" or "Xinjiang Uighur Autonomous Region." Likewise, all Tibetans are recorded as such on their identity cards, which must be produced, on demand, in many situations, including many where the result is discrimination and contempt. This formality too is now held by some experts on identity politics as an impediment to the inevitable fusion.

China's latest official White Paper on Tibet speaks as if this inevitable fusion has already happened: *"The People's Republic of China is a united multi-ethnic country created through the joined efforts of the peoples of all the ethnic groups in China. Over the long course of history, these ethnic groups have grown into a single community that responds to each and every challenge under the single name of the Chinese nation. Tibet has been a part of China's territory since ancient times…."*[193]

To become simply *Zhongguoren* or *Zhonghuaminzu,* citizens of the sole ethnicity that exists in China, is to thus enter into modernity, even, some Chinese theorists say, into history, to become mobile in the modern sense of being an individual atomised unit of labour production available to move to wherever employment may exist. Thus the

190 James Leibold and Cheng Yangbin, Minority Education in China: Balancing unity and diversity in an era of critical pluralism, Hong Kong University Press, 2014, 15

191 James Leibold and Cheng Yangbin, Minority Education in China, 5

192 James Leibold and Cheng Yangbin, Minority Education in China, 1

193 Tibet's Path of Development Is Driven by an Irresistible Historical Tide, State Council White Paper, 15 April 2015http://www.china.org.cn/china/2015-04/15/content_35325433.htm

circle is completed. Sedentarisation of the mobile pastoral nomads is not the end, it is but a stop on the way to the new mobility of the factors of production, as each citizen discovers where he or she may find cash work.

The Chinese geo-body is a fiction. The term geo-body was invented by Thongchai Winichakul as a way of denaturalising what is so often taken as natural, inevitable and real. It is an Asian, indigenous way of reclaiming local knowledge, rather than yielding, as usual, to the superior claims of globalised scientific knowledge. It draws attention to the strategy of asserting territoriality, that constructs and maintains spatial organisation, through classifying areas, inserting a discourse on boundaries and using power, or hegemony to enforce these dominant concepts.[194] To talk of the ultimate and inevitable fusion of the Chinese geo-body, transcending all differences of nationality, actually mystifies a process that the geo-body concept seeks to demystify.

From a Tibetan perspective, China is of a profoundly sedentary disposition. Even the richest of urban Chinese, despite their mobility, are sedentary. Even if they own many apartments (usually illegally), fly about in an executive jet, ski in Switzerland and snorkel on the coral reefs of Australia, and control a corporation registered in the British Virgin Islands, they remain rooted in the sedentary network that enables all this to happen. Their network of *guanxi* connections may no longer meet face to face on a daily basis, but China's "relational capitalism", as its supporters call it, relies on putting a huge effort into maintaining those connections, which means a lot of face time in banquets, ceremonies, gift giving, and brothels. That remains a sedentary anchor for even the most successfully opulent life. It is no accident that the current campaign against corruption is focused on specific circles of place-based networks.

In China, those who do move to the cities are rightly called migrants, even if they experience innumerable obstacles to making that migration last, by bringing their whole family with them.

The shift from peasant plot to urban apartment exchanges one sedentariness for another. China is understandably proud of this as its greatest achievement, accomplishing in two human generations what took centuries in Europe. There is much official rhetoric celebrating the new urban sedentariness as a law of development, a fundamental of human progress, which China has successfully engineered on a scale never seen before. Defenders of the *hukou* system point to the absence of slums as a uniquely Chinese version of urbanised sedentary life. *Hukou* means you are either urban or rural, not in between; either employed in an urban factory and entitled to stay in the city, or unemployed and back in the village. Either way, people are sedentary, not in the limbo of a slum, with roots nowhere.

To call China profoundly sedentary, by predisposition, is not to call it immobile.

It is no accident that China, with is sedentary bias, could think only of building houses for Tibetan pastoralists, as its most significant good, deliverable by the state, to improve and modernise the lives of the "herders." It did not think to improve the herds, even though it much wanted meat, or to establish a commodity chain connecting pastoral production landscapes with lowland Chinese regional economies. Permanent houses are the beginnings of civilisation, in Chinese thought, and the entry into modernity, and consumption.

Today's China celebrates mobility, of the modern kind. Modern mobility includes many aspects of life, such as the mobile leisure of tourism, including tourism to Tibet, as a self-making exercise in individuation and modernising oneself. It includes smashing the iron rice bowl of the revolution's guaranteed jobs for life in a state owned enterprise. The modern worker may have to look for work, and be willing to move to where the jobs are. Modern mobility, above all, means moving from country to city, no longer living in the shadow of the ancestors, nor ritually sweeping their graves once a year.

That is a big change, since there was historically an elision of the sedentary life of the peasant farmer, and immobility, on the plot of land inherited from the ancestors. Equating the virtue of sedentariness with actual landed immobility was replaced by an expanded concept of what it means to be sedentary, making the move to the city

194 Thongchai Winichakul, Siam Mapped: A history of the geo-body of a nation, University of Hawaii Press, 1994, 16

the new sedentary life. The ideal became the apartment, in a block of 20 storey apartments, surrounded by many identical apartment blocks, towering above the land.

In reality, for hundreds of millions of rural Chinese, this teleological destiny remained unattainable, as they could not escape their *hukou,* making them guest workers only in the city, with no right to send their children to a city school, or get treatment at a hospital, or get that apartment, even if their employment was to build those schools, hospitals and apartment blocks. They were classified as temporary residents only, whose presence was necessary to get jobs done, who could be ordered back to their home village as soon as they lost employment.

In vain, economists of the most neoliberal persuasion have argued that China should drop this *hukou*-based discrimination against rural migration to the city, on the grounds that labour, as a primary factor of production, should be free to go to where the other factors cluster, in the cities and factories. China clings to *hukou*, despite the ways it curtails the labour market, because the elite benefit from the disadvantage experienced by rural migrants, who must accept whatever urban jobs they can find if they wish to stay in the city. This discrimination is hardly unique to China. The chronic inability of the US to resolve the status of many millions of Hispanic immigrants without papers is another example of an elite that benefits from the work done by an underclass whose legality remains chronically in doubt.

"Ren Jianming, a professor of clean governance at Beihang University in Beijing, said officials were not used to a system that ran without corruption. 'Developers don't believe that, without bribing, they would get a project, and officials don't believe that, without bribing, they could be promoted,' he said. 'They don't trust a clean system. Officials have stopped or delayed making decisions to avoid risks. Even if they don't take a bribe now, they might be suspected or reported. Then their previous corruption would be found out.'"[195]

This systemic favouritism for network insiders, and disdain for outsiders, is endemic, even franchised up and down the managerial chain. For anyone with ambition, the key question is which exclusionary, competitive network to join, not whether it is necessary to have a network of gifts, favours and banquets. This can be understood positively, calling it a unique variety of capitalism with Chinese characteristics, a relational capitalism in which competing networks vie for dominance. Yet each network discriminates in favour of insiders, and against outsiders. A system of competing networks forces everyone into a network, as the only alternative is to be an outsider with no network. Not only is this inherently discriminatory, it is also inherently inefficient, allocating resources only to insiders, and contrary to how markets are supposed to work efficiently, setting price signals for anything and everything, for all buyers and sellers.

In contemporary China Tibetans, almost by definition, are outsiders, lacking in *guanxi*, in networks, other than a network of the excluded, which is not a coherent network at all. The entire game is rigged against those who start, by default, as outsiders, not players of the game. Tibetans are further disadvantaged, even when they remain in Tibet, by strict *hukou* restrictions making it illegal for rural Tibetans to work in cities, even though many, due to acute poverty, do so on a semi-legal basis, always fearful of official inspections of construction sites and other places where they find temporary, low-paid, casual, unskilled work, always worried they will be sent back to where they are registered. The mobility that is inherent to modernity is barely available to Tibetans; while traditional pastoral mobility is stigmatised as a fatalistic, animal-like random wandering about the landscape, relying fatalistically on heaven to provide. Relying on heaven is a classic Han Chinese pejorative phrase for barbarians, for those who are yet to conquer nature and rely perilously on whatever nature provides.

Han immigrants to central Tibet (Tibet Autonomous Region), however, have explicit and unusual exemptions from the strict *hukou* regime. The 2001 official instructions on how the policy of *xibu da kaifa,* opening up the west, is to be implemented, has specific directives exempting Han from the normal *hukou* constraints: "College graduates going to work in the Western Region may transfer his *hukou* (permanent residence registration) to the place of employment or domicile of origin, and the talent exchange agency under local competent authority should manage their personal files, free of charge for the first five years, and provide other personnel services related to the adjustment of file wage

195 Simon Denyer, Without corruption…,Washington Post, 11 Feb 2015

and appointment of professional titles. With regard to those talents who have come to the Western Region to invest, set up companies or devote themselves to the development of the Region, they can move their *hukou* to its previous place of registration if they return to the Eastern Region."[196]

TIBET AS ULTIMATE OTHER: CHINA'S EMPTY PASTORAL QUARTER

Because Tibet is consistently defined, in Chinese imaginaries, by what it lacks, it plays the role of the Other by which China is defined. China abounds in all that Tibet lacks. This is China's Orientalism, its comprehensive projecting onto its distant Other all that it fears and dislikes.

There is no end to the lists of what Tibet lacks. A recent text in the Scientific Development in China series published by China's State Council is specifically about the "extremely arduous" task of poverty alleviation.[197] Poverty is intractable in Tibet, this book explains, because poverty is not just in pockets here and there, it is in contiguous poor areas. "Characterised by pneumatorexis and hydropenia, Qinghai-Tibet Plateau is prone to disasters, where the level of economic and social development is far lower than the national average and even lower than the western average. In 2011, there were 55.64 million objects of poverty reduction in the 11 contiguous poor areas. These areas generally have a weak economic foundation, poor production and living conditions, low level of industrial development and poor infrastructure and public services. The task of poverty alleviation and development is extremely arduous."[198]

Tibet is defined by pneumatorexis and hydropenia. Looking up these unfamiliar terms, a Google search immediately takes one back to the original Chinese term *yangjie,* literally meaning oxygen famine, for which pneumatorexis is the equivalent in medical jargon. Hydropenia is water deficiency in the bodily tissues. The air Tibetans breath is deficient in oxygen, and the bodies of Tibetans are deficient in water,. Little wonder that these "objects" of poverty reduction are so backward.

This unsubtle materialist determinism names a deep-seated Chinese fear of Tibet, that Tibet is not only cold and at altitude, it is unnaturally, life-threateningly frigid, and in the thin air every breath may be your last. The oxygen famine of Tibet looms large in Chinese imaginaries. A high proportion of scientific research done by Chinese scientists in Tibet, over many decades, has focussed on hypoxia, or altitude sickness, and how Tibetans seem so untroubled by it. Until recently, Han Chinese sent to Tibet could rely on having close at hand an oxygen pillow, to turn to as soon as hypoxia symptoms begin. Now, more sophisticated ways of making up for the Tibetan oxygen famine are built in to the infrastructure, such as the train to Tibet which is pressurised like an aeroplane, saving travellers any inconvenient oxygen famine until they step onto the platform at Lhasa.

Pneumatorexis is such a specifically Chinese term that a search on Medline, the global database on medicine, while listing over 90,000 articles and books on hypoxia, comes up with nothing for pneumatorexis. By now, Chinese science has investigated not only why Tibetan people are so unconcerned about the oxygen famine, they have investigated by Tibetan wolves, mice and voles handle it.[199]

China has reason to fear what it calls chronic maintain sickness (CMS), as it is a major limiting factor on successful transmigration of lowland Chinese settlers. A recent study concludes that: "CMS imposes a considerable burden on

196 Circular of the State Council's General Office on the Distribution of "Suggestions on the Implementation of Policies and Measures Pertaining to the Development of the Western Region" Submitted by the Western Region Development Office of the State Council; September 29, 2001, section 58

197 State Council Leading Group Office of Poverty Alleviation and Development of China, Key Problem: Tackling for Poverty Alleviation, Unity Press, 2012

198 Key Problem: Tackling for Poverty Alleviation, 119

199 Zhang W; Fan Z; Han E; Hou R; Zhang L; Galaverni M; Huang J; Liu H; Silva P; Li P; Pollinger JP; Du L; Zhang X; Yue B; Wayne RK; Zhang Z; Hypoxia adaptations in the grey wolf (Canis lupus chanco) from Qinghai-Tibet Plateau.,Plos Genetics, 2014 Jul 31; Vol. 10 (7), pp. e1004466 Zhang S; Zhao Y; Hu X; Liu Z; Chen X; Chen X; Du J; Distinct post-transcriptional regulation of Igfbp1 gene by hypoxia in lowland mouse and Qinghai-Tibet plateau root vole Microtusoeconomus., Molecular And Cellular Endocrinology, , 2013 Aug 25; Vol. 376 (1-2), pp. 33-42

Chinese immigrants to Tibet. Immigrants with characteristics such as a higher residential altitude, more advanced age, longer highland service years, being a smoker, and working in engineering or construction were more likely to develop CMS and to increase the disease burden. Higher blood pressure and heart rate as a result of CMS were also positively associated with the disease burden."[200]

China's military scientists take a keen interest in the effects of oxygen famine on soldiers stationed in Tibet, who suffer sleeplessness, dullness, reduced intelligence and slow response times, due to their inability to adapt to an atmosphere in which oxygen is about two thirds what it is at sea level.[201] It was also a major concern (and scientific research opportunity) for the tens of thousands of lowland Chinese workers brought to Tibet to construct the railway to Lhasa.[202]

Much of traditional Chinese medicine (TCM) is preoccupied with maintaining a bodily balance of heat and cold, generating a horror of cold external environments that threaten to overwhelm bodily stasis. There are many TCM treatments for excessive cold, but hypoxia is not only a new problem (and not one that much bothers Tibetans or the *amchi* practitioners of Tibetan sciences of healing) but hypoxia of the body originates in the *yangjie* oxygen famine of the air itself. Yet again, the default setting of Tibet is at fault.

Oxygen famine, frigidity, backwardness and a drifting population do not exhaust China's list of the deficiencies of Tibet. Perhaps top of the list these days is the trope of a "fragile ecology", as in this major report by the China Council for International Cooperation on Environment and Development (CCICED) in 2012: *"Qinghai Province is characterised by fragile ecology, which requires careful management to meet both regional and national ecological service needs."*[203] Qinghai, the northern part of the Tibetan Plateau, is defined by its lack, and the CCICED policy prescriptions all flow from this. The CCICED report proposes that: *"Eco-friendly growth is particularly important for W. China due to its important ecological function and fragile ecosystems. Some western regions have a fragile ecological environment with development banned or restricted under the Main Functional Zoning system. Extensive cultivation by farmers and expansion of grazing areas by herdsmen was interrupted by introduction of development limits on arable land and pastures. The western region has an average altitude of over 1000 meters, a fragile ecological environment, large areas of desertification, and is more vulnerable to predictable and unpredictable disasters and loss of human life associated with excessive resource exploitation. More than 70 per cent of sudden geological disasters occur in the western region. Urbanization is an important conduit to ensure the green development of the western region. New urban areas can act as a focus for investment, innovation and the development of new opportunities. They can also be a magnet to attract people from poor and fragile rural areas and provide them with improved opportunities."*[204]

The discourse of fragility attracts this task force of policy analysts seeking a greener future, as the dominant metaphor for much of China's western half, but especially Tibet and most especially Qinghai, where China's great rivers (and the Mekong) rise. All of CCICED's policy recommendations for Qinghai are framed by "fragile ecology." While their sympathies are with local communities and environmental protection, this dominant trope drives them to support grazing bans and nomad removals, and to propose urbanisation as a solution. A further irony is that Tibetans in exile have readily reached for the discourse of fragility to express their dismay at China's extractive economy in Tibet, even though Tibetans in Tibet see their environment as robust, not fragile, but damaged by lowland Chinese encroachments.

200 Tao Pei, Xiaoxiao Li, Fasheng Tao, Haotong Xu, Haiyan You, Linlin Zhou, Yan Liu and Yuqi Gao; Burden of disease resulting from chronic mountain sickness among young Chinese male immigrants in Tibet; BMC Public Health 2012, 12:401

201 Feng Liu, Jian-qiang Liu, Su-zhi Li, You-wei Chen, Deqing Yangzong, Zhao Shen Li: Predictive Risk Factors of Cardiorespiratory Abnormality for Upper Gastrointestinal Endoscopy in Tibet; Digestive Disease & Sciences, (2013) 58:1668–1675

202 WU Tian-yi, DING Shou-quan, LIU Jin-liang, JIA Jian-hou,CHAI Zuo-chun and DAI Rui-chen ; Who are more at risk for acute mountain sickness: a prospective study in Qinghai-Tibet railroad construction workers on Mt. Tanggula, Chinese Medical Journal 2012;125(8):1393-1400

203 China Council for International Cooperation on Environment and Development, Policy Research Report on Environment and Development: Regional Balance and Green Development 2012, 80 http://www.iisd.org/publications/china-cciced-policy-research-report-2012

204 CCICED 2012, 92, 94, 117

The inevitable consequence of all these lacks –of oxygen, warmth, mastery over nature, urban comfort and infrastructure- is that the people too are lacking. It follows that the Tibetans, as a people, are backward, ignorant, unknowing, unaware that grazing their animals willy-nilly leads directly to rangeland degradation. It seems inevitable that a scattered, illiterate, superstitious, oxygen-starved populace drifting around the remote areas of a vast plateau will be backward, even primitive. To lowland Chinese audiences, this is self-evident.

Equally self-evident is that the solution is to leave. Who would voluntarily choose to live in such a harsh environment if they had a choice? Urbanisation and industrial employment beckon as the obvious alternatives, just as they do for all Chinese. If that means leaving behind the blizzards and gales, deserts and dust-storms, animal wandering and helpless vulnerability to blind fate, why not leave? If that depopulates the land, leaving the great Yangtze and Yellow rivers to meander across the Tibetan grasslands unimpeded, so much the better. In the cities the Tibetans will learn impulse control, sociability, civilised behaviours, budgeting, workplace shift-work discipline and an appreciation of urban comfort. Just like everyone else.

TOOLS OF MODERNITY FOR APPREHENDING TIBET

China has embraced not only Mr. Science as its saviour from the humiliations of the past, but also the modern tree-like model of scientific knowledges branching out on their own, each performing its' specialised function. Knowledge of how Tibetans or Mongolians manage the grasslands might be useful, but that is a question for social scientists. This model creates a hierarchy of pure and applied sciences, in which the social sciences are somewhat peripheral, and in need of regular ideological pruning lest they branch too far and overbalance the tree. What matters is to concentrate first on doing basic science, generating streams of data from observation of the fundamental physics, chemistry and biology of sunlight, snowfall, temperature, altitude, slope, seasons, soils, hydrology etc. Much of this can be done by remote observation through satellites in orbit above the earth, without experiencing the grasslands in an embodied way at all.

This may seem a lifeless approach to understanding life. But China sees this as the necessary civilising work of filling in the data gaps of global science, by deliberately starting from zero, as if approaching a new planet, methodically building up basic knowledge step by step.

In these ways China has worked to understand that which, from the outset, appears strange, counter-intuitive, unfamiliar and problematic. What most immediately strikes Han Chinese is: how is it possible that nomads have so much land, yet produce so little? How can it be that herders say they need even more land than is currently allocated to them, when China's peasant agriculture has long been able to sustain an entire family on a plot much less than one acre?

Thus Tibet remains invisible, out of sight, not amenable to such de novo, ab initio, from-first-principles accumulation of meaningful data. This is for more than one reason. First, the Tibetan Plateau is big, close to two per cent of the land surface of the planet, which means data collection is a massive task. Second, in such a cold climate, most plants keep most of their biomass below ground, measurable only by destructively digging it up, not measurable by satellite. Similarly, most of Tibetan culture remains invisible to the Han gaze, since so few Han have learned to speak Tibetan, and Tibetan informants have every incentive to tell Han what Han want to hear. China cannot readily access the living matter of the Tibetan turf, nor readily access what Tibetans actually think or believe.

Historically China has not understood grasslands, seeing the vast grasslands to the north and west of the Han heartland as the direction of danger, where barbarians on horseback sweep in out of nowhere, plundering the crops and slaughtering the Han. Although there has been no nomad invasion of the Chinese heartland since the Manchu Qing dynasty conquered China in the mid-17th century, historic examples shape profoundly the discourse

on ethnic relations in a party-state that insists that the policy solution to any problem has to be done "with Chinese characteristics", and that includes ethnic relations among the many minority and one big majority nationalities.

China has never understood the grasslands because it never needed to. Even when it ruled the grasslands, it usually did so through local elites, and was content with extracting taxes, or making money through state monopolies on key trade commodities, or lending to local elites at usurious rates. China did not govern the grasslands, in the sense of actually mandating production and protection regimes, dividing landscapes into production or protection zones by imposing administrative caps on what activities were permitted. Only the modern revolutionary nation-state felt it needed to manage the grasslands for specific outputs, gradually expanding its accumulated data on mineral deposits, grassland productivity, hydropower potential, access routes and nuclear war strategic posture. The Tibetan Plateau was, from the early years of revolutionary government, understood as an impregnable bastion against American invasion, at the foot of which military industries, steel mills and rocket testing pads proliferated. China quickly found many potential uses for Tibet, all of which depended on a strong state extending its reach far into the plateau, using to the full the allocative power of a centrally planned command and control economy to spend heavily on this Third Front militarized zone, raising the capital by taxing heavily the peasantry in whose name the revolution had been fought.

But many of these modern uses remained potential, with realisation difficult and elusive. Some major statist projects, such as turning rangeland into ploughed farmland failed quickly, at a considerable cost in widespread starvation in the late 1950s and early 1960s. But other modernist projects seemed to beckon fulfilment, even if it took decades rather than a few years, such as the construction of all-weather transport corridors, impounding water for hydropower, building towns and cities, mines and smelters. This was the age of the engineer, not only in Tibet but in the first decade of the 21st century the overwhelming majority of the CCP Politburo leaders were engineers by training.

Whether these nation-building projects came to pass or not, they all shared common characteristics. All were predicated on isolating specific areas as enclaves of factor endowment whose location lent itself to intensive exploitation. The atomistic logic of scientific modernity was core. The pilot plants, the demonstration project, the exemplary enclave all promised to work because they were excised from their context and reimagined as specific locations for the intensive construction of modernity. Later came the intensive development of scenic spots into tourism resorts, again by excising them from the Tibetan economy, repositioning them as part of China's circuit of scenic spots, in the tradition of scenic spots as places where the cultivated individual performs one's cultivated sensibilities.

Without exception, every project thus conceived was predicated on exception, on comparative advantage, on creating new centres to be surrounded by new peripheries, neglected hinterlands where most Tibetans lived and still live, which attract no investment while the enclaves monopolize the capital expenditure budget of the state, and much later, of private entrepreneurs.

China's entire approach was a gaze from afar, reliant on mapping, data gathering, scientific expeditions, measuring, drilling, blasting, capturing and enumerating Tibet as an object of knowledge, to find those specific opportunities for modernity to manifest, thus proving to the world, and to the grateful Tibetans, the superiority of modernity with Chinese characteristics.

The language of the party-state for this grand civilising mission was utterly immodest, and deeply dualistic. Repeatedly, over many years, China has depicted its impact on Tibet as a historically necessary progress from darkness to light, from isolation to connection, from remoteness to integration and globalisation, from stagnation to energetic activity, from weakness to strength. This dominant discourse repetitively proclaimed Tibetan modernity as a destiny, in keeping with the well-known laws of progress and development, which the party-state had instrumentally and benevolently accelerated.

Immanent in this hegemonic discourse is the metaphor of the tree, thrusting ever up into the light, all component parts working together to utilise to the max the available sunlight, water and soil nutrients, to achieve a common goal. The tree of Tibet is a discrete unit, which, strengthened by the assistance of the Han elder brother, now grows strong and straight. In all of these plans, the grassland was at most the baseline, the given, the starting point for selective improvement. If the grassland was a resource in and of itself, it was as a putative source of intensified meat production, but this never materialised, partly because of the passive resistance of the herders who preferred to keep their wealth on the hoof, and partly because China never invested in a network of stockyards, abattoirs, freezer plants and transport networks, such as the USSR did in Mongolia, to maximise meat production and allocation to distant urban markets.

Grassland livestock production remained merely the default position, to which everything reverted once all the scientific expeditions had done their measurements, the feasibility studies had been done, project inclusion in the Five-Year Plan announced, capital allocated and in reality, little actually happened. This was true for a long list of projects seeking capital, based on local specialisations and niche products that might find a wider market through integration into the Chinese economy. Other projects did succeed in being built, only prove disappointing operationally. This is true of the many hydropower dams and geothermal power stations in Tibet, which have failed to generate sufficient electricity for the fast growing towns, necessitating instead the recent extension of high voltage power pylons all the way from Xining to Lhasa and more recently from Sichuan up into eastern Tibet, to meet the chronic shortage of electricity.

Whether the key state construction projects failed or succeeded, they all were based on looking in from far outside, ignoring local perspectives and complexities, planning future modernity by focussing exclusively on singularities, to the exclusion of all else. Consistently, local knowledge was not only ignored, it seldom occurred to planners that it might even exist. Mr Science was saving China and would save Tibet too, from itself.

Throughout, the grasslands remained in default position as the yet-to-be domain of potential, or of ongoing stagnation.

CHINA'S ASSIMILATIONIST STRATEGY FAILS IN TIBET

A major reason behind China's inconsistent and counter-productive approach to Tibet is a reluctance to face up to the failure of China's model for absorbing and assimilating frontier regions. The model, trialled and perfected over many centuries of China's expansion southwards and westwards, is quite straightforward. It relies on two mutually dependent and supportive elements: the military and the poor peasants. Once an area has been conquered, the military remain, garrisoned to prevent native uprisings that might try to reverse recent history. Rather than incurring the expense of maintaining distant troop numbers in cantonments, at central expense, poor, often desperately poor peasants have been encouraged to migrate, often with the attraction of ready access to farming land taken from the conquered. This establishes a viable economy. The soldiers need food, and the peasants need security. A new settler society is begun.

In a modern economy, where there are linkages between provincial economies, based at least in part on comparative advantage, these local economies can connect to the wider economy, prompting further growth. One example would be the melons of Hami, in Xinjiang, for which there is a market in distant Chinese cities, and, via modern highways and railways, the capacity to get them to market in a timely way. In resource-rich new lands, there may also be opportunities for extraction, employing more immigrants, and so a new economy grows. The capacity of the modern state to accumulate and allocate investment capital also means that local specialties can be produced more intensively and on a bigger scale, for the national as well as the local market. Growth accelerates further.

This model, with variations, enabled China to settle Sichuan and Yunnan with Han over earlier centuries, and more recently, to settle Inner Mongolia and Xinjiang, to such an extent that the Mongols and Uighur were outnumbered by immigrants. This is the great advantage of contiguous empire, unlike the overseas empires of the European powers, which usually struggled to populate their conquests with politically loyal settlers.

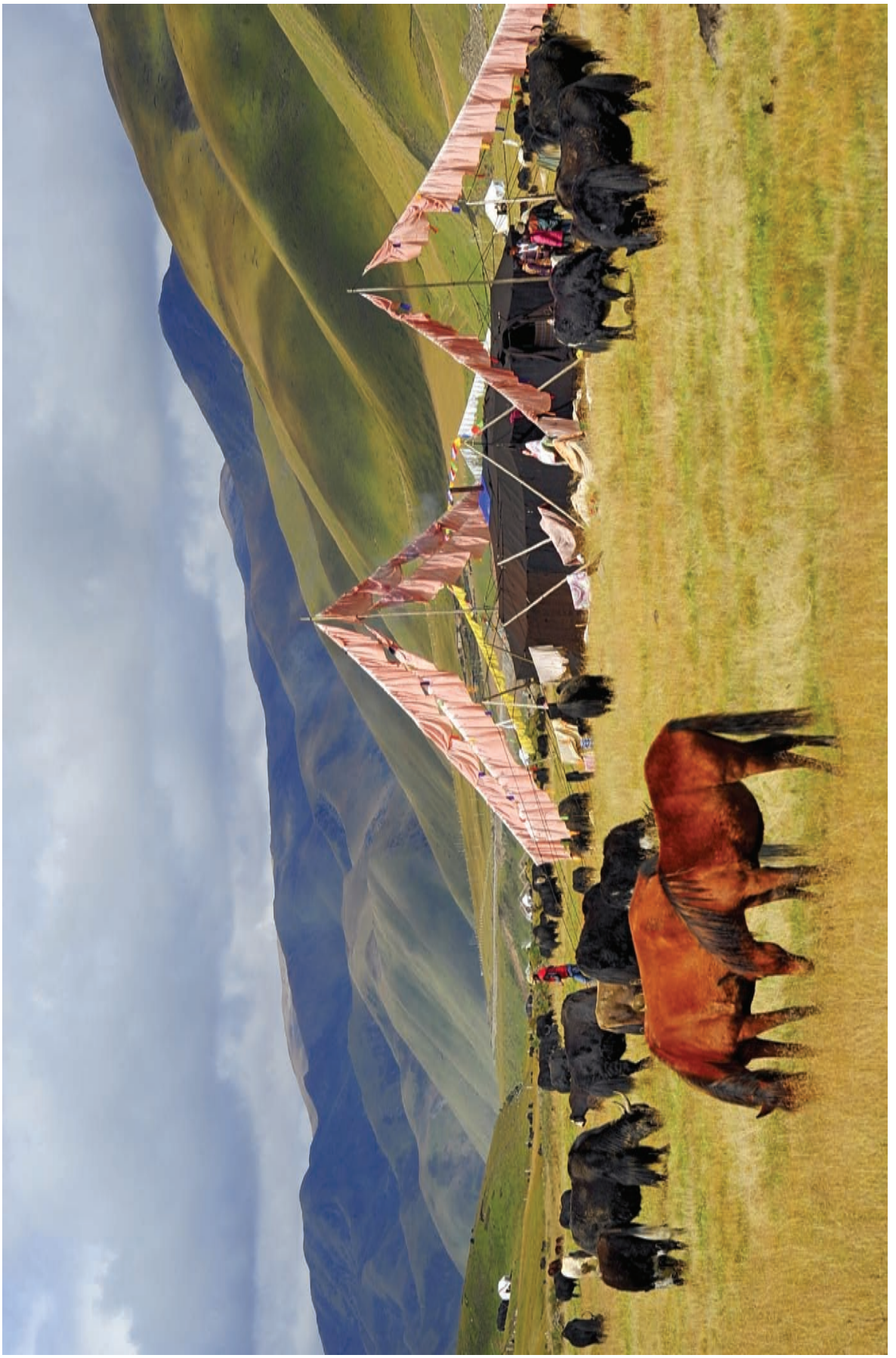
But on the Tibetan Plateau very little of this strategy worked.. Every Tibetan town was garrisoned, but there was almost no land suitable for intensive farming, other than the valleys already farmed by the Tibetans. Experiments in ploughing and cropping the plateau pastures almost always failed in the intense cold of the plateau and its short growing season. Even though the state was able and willing to engage in large scale social engineering, directing surplus populations, and demobilised soldiers as well as "enemies of the people" to remote areas, there was no economy to kick-start, because there were so few settlers. Even when revolutionary China was at its most dirigiste, the Han Chinese sent to Tibet, or volunteering for revolutionary duty, were not so many, and largely restricted to cities and towns.

China has not fully faced the inaptness of this model to the climatic realities of Tibet. As a result, there is no plan B. This is not merely stubborn path dependency. Throughout the decades, it has often seemed as though the model is about to succeed, and an economic take-off will at last be achieved. China has frequently identified "pillar industries", which will support a settler economy, both by accumulating wealth and by thus providing employment for immigrants. In forested eastern Tibet, logging was for decades a pillar industry, until the 1998 flooding of the middle and lower Yangtze prompted a drastic rethink of a policy that had assumed it was possible to have both timber and a secure water supply indefinitely. Mining, Tibetan crafts and tourism were often deemed pillar industries, and seldom met expectations. But gradually, as the central leaders have poured more investment capital into infrastructure, the prospects for take-off seemed tantalisingly close; and may soon succeed.

The long delay in implanting a settler economy may be a major factor in the failure to integrate rural Tibet, and its pastoral livestock production economy, into the national economy. In other provinces settled by Han in large numbers, while the first step is to feed the troops and gain an economic niche, the settlers discover entrepreneurial opportunities to add value to local products, or new markets in neighbouring provinces, or ways of both scaling up production and adding value through processing raw commodities to a semi-manufactured stage. Almost none of this happened in Tibet, and the pastoral economy languished. The focus of central leaders remained on constructing the preconditions for connecting Tibet to China: on highways, power stations, reliable electricity, pipelines, mapping extraction zones, railways and urban hubs. Since China's neoliberal turn, that would suffice in other provinces, where settlers, notably the new class of well-connected cadres, would be able to identify the industries with best potential, and borrow from the state's policy banks whatever capital was needed to get a new industry into production. In Tibet, that seldom happened, despite long lists of local projects hoping for funding.

Those projects, scaling up local specialties such as walnuts, pears, carpets, hot springs, mushrooms, would be the normal way of enabling a small local economy to make best use of its comparative advantages, to find a niche in a wider economy. If the objective was to strengthen the local economy, enabling Tibetan communities to enter history and the market, then one would find the sort of development projects to be found around the developing world, that start by identifying local strengths, developing them further.

This has happened in Tibet, more often due to local initiative than through planning. In parts of Tibet, local communities have become wealthy by harvesting caterpillar fungus, so wealthy that labour-intensive rearing of sheep has been forgotten. These are not state projects, however.



Nomads and their herds, Tibet, 2013

Chapter Seven:
Ways Ahead: New Learnings, New Approaches

Tibetan pastoralists make extensive use of entire landscapes, indeed the whole of the Tibetan Plateau below the bare mountain peaks. China does not recognise this as a major achievement. The extensive production landscape of Tibet never, in Chinese eyes, appeared as a civilizational strength, based on the necessity of mobility as the fundamental strategy for maintaining a livestock economy while also maintaining the ongoing health of the lightly, seasonally grazed grasslands. The whole of landscape approach of the Tibetans appeared to Chinese observers, be they scientists or policy makers, merely as scatter, an animal-like existence following animals following grass.

THE TIBETAN PLATEAU IN THE WHOLE LANDSCAPE APPROACH

The whole landscape approach is the latest development in science and policy making to regain a holistic perspective. The Global Landscapes Forum (GLF) is a broad platform, embracing UN agencies, multilateral and bilateral development agencies and financiers, NGOs big and small, and many governments directly finance its' operations. Each year GLF holds a bigger forum than before, focussed closely on the current fashion for market-based solutions that also respect traditional approaches that have long been capable of a whole landscape approach.

The 2013 GLF concluded: *"There is a long history of segregating landscapes by sector, leading to fragmented and isolated management decisions. As a result we see many examples of unsustainable land use, leading to huge greenhouse gas emissions, loss of ecosystem services and unnecessary risks for livelihoods and food production. A landscape approach seeks to better understand and recognize the interconnections between different land uses and different stakeholders by integrating them into a joint management process. This provides the opportunity to better handle trade-offs and realize synergies in the landscape. Landscapes hold the key to a very large part of the future we want. Rights-based approaches to land management are rooted in international treaties and legislation, yet are rarely implemented at the ground level. Any approach to land management must recognize and prioritize the rights, needs and positive contributions to ecosystem conservation of marginalized groups such as indigenous peoples, local communities, pastoralists and peasants. Landscape approaches that consider the full implications of a policy for local people benefit the environment, the economy and society."*[205]

The 2014 GLF went further: *"Proponents of landscape approaches encourage countries to move away from sectoral policy-making approaches, toward an integrated bottom-up approach that places the poor and vulnerable at the heart of decision-making, and increases in-country coordination to ensure coherence and inclusiveness. Climate-Smart Agriculture (CSA) was developed in direct response to a climate change policy debate that had taken a compartmentalized approach to adaptation and mitigation and that had not adequately addressed the role of agriculture in food security, or the threat of climate change to food security."*[206]

Paula Caballero, Senior Director of Environment and Natural Resources Global Practice at the World Bank says: *"We need to demonstrate the relevance of the landscape approach, demonstrate why it's fundamental to the full delivery of the Sustainable Development Goals (SDGs) targets. The landscape approach should become a prism for the full SDGs*

205 http://www.landscapes.org/glf-2013/outcomes/
206 http://www.landscapes.org/publication/2014-global-landscapes-forum-outcome-statement/

agenda. That means that we don't just look at the obvious targets that focus on terrestrial ecosystems, or forests, or water or oceans, but that we take those targets that might not be so obvious, and put a landscape lens on them. Rather than looking at a target on women's participation in a generic way, that we actually look at it through the lens of the landscape and what landscape management means for women's empowerment and participation."[207]

The whole landscape approach is one example of global science trying to overcome the fragmenting tendencies of its positivist reduction of complex realities to a few measurable variables. Ecology, as a science, even a science of sciences, also attempted a holistic understanding of entire ecosystems, only to discover that, even in this era of big data, it is impossible to ever gather enough data, or to make sense of it, to ever discover the equilibrium that an ongoing ecosystem, by definition, always returns to. The whole landscape approach is perhaps more modest than the aspirations of ecology, but the reality is that atomistic science, based on isolating a few variables, persists as the norm, and continues to be China's model of modernity, of high human quality, and the acme of civilisation.

Narrowly defined questions lend themselves to either/or answers. If a mandatory stocking rate of beasts per hectare fails to halt degradation of the Tibetan grasslands, then the answer must be an even lower stocking rate, based on recalculated carrying capacity. For decades that has been the inexorable direction of animal husbandry policy for the Tibetan Plateau, requiring nomads to concentrate their shrinking herds on small plots of allocated land, oblivious to the resulting poverty of the herders, or to the likely other causes of degradation, especially the politically taboo topic of past state failures, and their cumulative impact on the integrity of the sod.

Because those cumulative state failures are forbidden topics, part of a huge corpus of past mistakes that may not be mentioned, it is hard for conservationists worldwide, seeking to engage with China, to question the official logic of nomad removals. Instead they accept not only China's arguments as to why grazing bans are necessary for rehabilitation of degraded lands, they also accept China's framing of the issue. China's publicly named categories are the categories of conservation science worldwide: the need to reduce or reverse degradation, to protect watersheds and sequester carbon. What's not to like? If these are the drivers of China's grasslands policy, it shows China is asking the right questions, is actively seeking solutions and doing its bit, as a globally responsible sovereign state, to remedy problems which are not only China's but the world's problems. It all seems to fit. If China's methods, of mass social engineering, relocating entire populations, are a bit drastic, well, this is China, after all.

The biggest of the conservation NGOs, with global reach, are used to working in different ways around the world, as circumstances allow. In most countries they work directly in chosen areas of concern, with local communities, local leaders and businesses, to achieve conservation outcomes such as saving the remaining habitat of gorillas, or rhinos, or elephants. These well-resourced BINGOs (big international NGOs) have learned from experience that success over the longer term depends on not only having the government on side, but also local communities which can support or subvert the conservation effort.

"*Protection and conservation of forest has gone hand in hand with colonial and industrial forestry, and both are associated with the establishment of state control over forests."*[208] Since the colonial times when European powers both exploited and protected forests, usually excluding (on paper) the locals from the protected areas, the global conservation movement has gradually learned that exclusion turns villagers near or even inside the protected area into antagonists, who will raid the natural resources designated for protection, when they think they can get away with it. Excluding human use, including customary uses embedded in local community lives, is simplistic, as if the problems of conservation can be solved by a fence. Exclusion is now widely understood to be counter-productive, full of perverse outcomes,

The learning curve of global conservation has led to a wide range of more inclusive approaches, such as Community-Based Natural Resource Management (CBNRM), in which communities adjacent to the conservation zone

207 http://www.landscapes.org/landscape-approach-pave-way-achieving-sdgs-experts/

208 Derek Hall, Philip Hirsch and Tania Murray Li; Powers of Exclusion: Land dilemmas in Southeast Asia, U Hawaii Press, 2014, 65

are trained and employed as protected area rangers, and given other income generation opportunities to make up for the detriment of losing access to bushmeat hunting etc. Sometimes this involves the big international NGOs (BINGOs) in a major effort to create alternative income generating schemes for the locals, which may take up more time and money than the species conservation program.

But in China the BINGOs long ago learned that partnering with local communities and local governments is not possible, that the central state is the key partner and often the only partner. The BINGOs have now functioned in China, in this way, for decades, and are well-established in the Chinese system, as a source of finance, ideas, discreet policy advice and demonstration projects that may implicitly critique the usual top-down way, but always take care to avoid overt criticism.

IS STATE FAILURE ON THE AGENDA?

Under such circumstances, how is it possible to maintain sufficient critical distance to discern drivers and motives that go beyond the official conservation rhetoric? How is it possible to identify past state failures, or a string of successive state failures, in a state that is quick to see any mention such forbidden topics an anti-China imperialist plot to humiliate China all over again? A recent analysis published by rangeland experts says: *"Land conflicts are often deeply rooted in governance failures –an area that is often both unfamiliar and uncomfortable territory for international conservation organisations, particularly those that work closely with state agencies."*[209]

Thus China sets the terms of debate, defining the Tibetan question as one of conservation, and no-one is willing to look for other agendas. Although China's primary concern is access to the glacial headwaters in Tibet of both of its major rivers, the Yellow and Yangtze, the conservation argument is deftly couched as a global contribution. It accords with the declared goals of global conservation that more protected areas be declared, more rivers saved from erosion, more grasslands restored to their original wilderness purity, and more carbon thereby captured. It's all good.

This is enormously appealing to conservationists who believe they are the voice of objective truth, and the objective necessity to set aside as much as possible of the planet in officially protected areas where human activity is as little as possible, and what activity persists is as harmless as possible. The claims of science to objective truth, and of conservationists as the voice of nature, of the iconic species which cannot speak for themselves, The universal scope of conservation, spanning times, spaces and multiple species, has become so embedded it is the new normal. In much of Asia*, "during the 1990s and 200s, discourses promoting conservation have become ambient –as pervasive, and unmarked, as the air we breathe."*[210]

HAN NORMALITY: THE UNMARKED CATEGORY

Unmarked categories are especially powerful because they are pervasive, and frame what is possible. China has its own unmarked categories that also frame the Tibet question. Usually encompassed by a vague portmanteau term appended to any official policy, China's unmarked and unremarked category is simply the suffix: *"with Chinese characteristics."* This phrase is added to anything that China intends to do in its own way, with outside commentary or analysis dismissed as interference in China's sovereign right to go its own way.

As China's strength grows, the range of policies *"with Chinese characteristics"* grows longer. These days China even proclaims its minority nationalities policy to be the most successful in the world because it is ethnic policy

209 Hijaba Ykhanbai, Rishu Garg, Aman Singh, Stephen Moiko, Cherie Enawgaw Beyene, Dilys Roe, Fred Nelson, Tom Blomley, and Fiona Flintan; Conservation and "Land Grabbing" in Rangelands: Part of the Problem or Part of the Solution? International Land Coalition, 2014, 6 http://www.landcoalition.org/publications/conservation-and-land-grabbing-rangelands-part-problem-or-part-solution

210 Hall, Hirsh and Li, 60

"with Chinese characteristics." The official in charge of ethnic work writes: "We can say that in comparison with any other country in the world, our nation is the most successful work done. National Work must maintain a strategic concentration, and always adhere to solve the ethnic issue with Chinese characteristics, adhering unswervingly to the right path, not offset."[211]

This is circular logic, since "Chinese characteristics" means Han Chinese characteristics, as defined by a party-state whose top priority is to become the exemplary model of all that is most advanced, the acme of civilisation, to be followed by everyone else, including the 55 officially designated non-Han minority nationalities within China.

Han normality is the unmarked category. James Leibold, a close observer of ethnic policy in China notes: *"National identity, Xi has often made clear, should always trump narrow religious and ethnic affiliations. Since coming to power, Xi Jinping and other Politburo Standing Committee members have spoken repeatedly of the need to strengthen the "four identifications" (sigerentong)—identification with the motherland; the Chinese nation; Chinese culture; and the socialist road with Chinese characteristics—among the ethnic minorities."*[212]

Deeply embedded in "Chinese characteristics", far from view or conscious awareness, is the assumption that sedentary life is good and normal; mobile life is barbaric and a threat to the sedentary, sitting targets. To be sedentary, tilling a plot inherited from the ancestors, whose nearby grave is ritually swept, is to be civilised; to follow the animals is the epitome of the uncivilised, barely distinguishable from the life of the animals the herder blindly follows. This is so axiomatic and self-evident it rarely needs to be said. If anything, it is so rooted as a foundational concept that the party-state struggles with it, insofar as China's leaders now define everyone's future as urban, and the annual sweeping of ancestral tombs as wasteful of land that could be mobilised for urban growth and agribusiness intensification.

Seeing like a state, the sedentary are scrutable, legible and taxable. The sedentary peasantry can be squeezed for revenue to build modernity, and can be monitored by cadres, and told what to think. If they protest, they can be quickly quelled. If they misbehave seriously, not only can the black hands be caught and punished, but collective punishment can be meted out to whole families and villages. Revolutionary China relied on these coercive traditions, even as it proclaimed the triumph of a revolution in the name of the peasantry.

211 Ling Jihua, The 8 Necessaries of Ethnic Work, Seeking Truth [Qiushi], 2014-12-16 http://mp.weixin.qq.com/s?__biz=MjM5NjQ1NjY4MQ==&mid=265871391&idx=1&sn=8fae3845370850f6658f20f7dc38816a&utm

212 James Leibold, A Family Divided: The CCP's Central Ethnic Work Conference,: China Brief, Volume: 14 Issue: 21, November 7, 2014

Epilogue

Pushed and pulled, the pastoralists of Tibet are entering modernity. A combination of incentives and grazing bans propels them into modern life, in a concrete blockhouse in a straight line of identical small houses, on a road leading into a nearby town. There they must stay, according to plan, until the grazing ban experiments have run their course and China has the data it needs to verify that grazing bans are indeed the essential policy tool for revegetating degrading pasturelands.

But the grazing bans began in 2003, designed to run three, or five or at most ten years, yet no land has been restored to the pastoralists. If anything, the grazing bans are increasingly permanent, and expanding, as red lines are drawn on official maps proclaiming protected areas that were long protected by the daily practices of sustainable livestock producers.

China sees only the prospects of further gain by further intensifying the grazing bans, removals and resettlement of pastoralists away from their pastures, their land tenure certificates nullified. Under National Main Functional Zoning, the fate of most of Tibet is to be designated a watershed protection zone for the benefit of downstream lowland China. Thus the pastoralists, driven by poverty, degradation and regulation, enter urban modernity as fringe dwellers, under close official scrutiny.

Many Tibetan pastoralists enter modernity voluntarily, especially the poorest, the elderly and the sick. Modernity promises comfort, amenities, facilities, warmth, excitement and a life of ease, compared to the hard and risky work of pastoralism. But to become modern means not just one leap, one move. Modernity requires constant reinvention of the self. The move to the urban fringe is just the first step, the further destination, China's planners say, is to join the transmigrating labour force seeking work in city factories, far from Tibet.

To quote one of the most celebrated insights into modernity: *"To be modern is to find ourselves in an environment that promises us adventure, power, joy, growth, transformation of ourselves and the world –and at the same time, that threatens to destroy everything we have, everything we know, everything we are. Modernity pours us all into a maelstrom of perpetual disintegration and renewal, of struggle and contradiction, of ambiguity and anguish. To be modern is to be part of a universe in which, as Marx said, 'all that is solid melts into air.'"*[213]

The mastiff guard dogs of the Tibetan pastoralists preceded their owners into modernity. Early this century China discovered an utterly modern fashion for Tibetan mastiffs, traditionally used to guard the black yak hair tents, and the few possessions of pastoralists, while the herders were out with their herds. These fearsome dogs are utterly loyal to their owner, and ferocious towards anyone else, kept from attacking by rope and a stake driven into the ground. This attribute perfectly displayed the worldview of the new class of urban Chinese bosses, the *laoban*, who dominate modernity with Chinese characteristics. The *laoban's* mastiff exemplified the qualities the boss required of his staff: total loyalty to the boss and a predatory attitude to everyone else.

The mastiff craze reached extraordinary heights, and Tibetans who knew their dogs went into business to supply the trade, investing in this new market. In 2006, at the peak, China's *Foreign Language Press* published in English a glossy 98-page paean to the mastiff, opening with this poem: *"The Tibetan mastiff lives in Tibet,/ the most mysterious*

213 Marshall Berman, All That is Solid Melts Into Air: The experience of modernity, Verso, 1983, 15

snowy plateau in the world./ Boasting ferocity rivalling that of lions and tigers,/ aristocratic aloofness and elegance,/ unquestionable loyalty,/ and an amazingly high degree of intelligence,/ the Tibetan Mastiff deserves/ the honour of being titled 'the Holy Dog.'"[214]

In Xi Jinping's China, ostentatious displays of the wealth and power of a *laoban* are now frowned on, and the bottom has dropped out of the mastiff market. The *New York Times* reports: *"Mary Peng, the founder and chief executive of the International Centre for Veterinary Services, said 'Ten years ago, it was German shepherds, then golden retrievers, then Dalmatians and then huskies. But given the crazy prices we were seeing a few years ago, I never thought I'd see a Tibetan mastiff on the back of a meat truck.'*

"At the peak of the mastiff mania, some breeders pumped their studs with silicone to make them look more powerful; in early 2013, the owner of one promising money-maker sued a Beijing animal clinic for $140,000 after his dog died on the operating table during face-lift surgery. 'If my dog looks better, female dog owners will pay a higher price when they want to mate their dog with mine,' the owner told the state-run Global Times newspaper, explaining why he had asked surgeons to alter the dog's saggy mien. Li Qun, a professor at Nanjing Agricultural University and an expert on Tibetan mastiffs, said speculators were partly to blame for sabotaging what had been a healthy market. But also, as prices spiralled upward, unscrupulous breeders began mating pure Tibetan mastiffs with other dogs, diluting the perceived value of the breed and turning off would-be customers.

"These days, those mastiff breeders left in the business are suffering from overcapacity, as it were. Buyers have largely disappeared, and prices have fallen to a small fraction of their peak. The average asking price for desirable dogs — those with lionlike manes and thick limbs — is hovering around $2,000, though many desperate breeders are willing to go far lower. 'If I had other opportunities, I'd quit this business,' said Gombo, a veteran breeder in China's northwestern province of Qinghai. 'The pressure we're under is huge,' he said. Since 2013, about half the 95 breeders in Tibet have gone under, according to the Tibetan Mastiff Association, and the once-flourishing Pure Breed Mastiff Fair in Chengdu, in the south-western province of Sichuan, has been turned into a pet and aquarium expo. In some ways, the cooling passion for Tibetan mastiffs reflects the fickleness of a consuming class that adopts and discards new products with abandon."[215]

Those who live in modernity know well this boom and bust cycle. It is new to Tibetan pastoralists who see at first the promise of a better life, aided by propaganda posters on the grasslands depicting the promised new resettlement housing looking like apartments on a village green. But the peri-urban cinderblock is not the destination. From there, China expects the ex-nomads to reinvent themselves as factory workers or as feedlot ranch hands forking barley and soybean meal into troughs for cattle fattening prior to industrialised slaughter. This is the plan. It may be a vision for the future generated far from the grasslands, but in pastoralist communities, its implementation depends on persuasion, by officials, usually Tibetan, as well as command.

In modernity, the ultimate persuader is science, the claim of objective truth resulting in objective necessity. As the Tibetan pastoralism research Yonten Nyima reminds us*: "Officials sell the project to pastoralists with the rhetoric of science. They accept government discourses labelled as science uncritically. Officials take rangeland degradation as fact and suggested solutions as science and they persuade pastoralists to implement the program in the way they want by deploying the rhetoric of science. As a result, pastoralists found it difficult to refute what the officials told them about the program because they feel they have to believe what science says, though their own knowledge and observations suggest otherwise. This discourages pastoralists to challenge the program's assumptions, which they feel they have to accept without doubt."*[216]

214 China's Tibetan Mastiff, Foreign Languages Press, 2006

215 Andrew Jacobs, As China's mastiff mania dims, dogs are discarded, International New York Times Asia Edition, April 20, 2015

216 Yonten Nyima (Yundannima in Chinese), From 'Retire Livestock, Restore Rangeland' to the Compensation for Ecological services: State interventions into rangeland ecosystems and pastoralism in Tibet, PhD dissertation, University of Colorado, 2012, 199-200

The lamas, khenpos and yogis of Tibet do know the creative destruction cycles of modernity. They have experienced modernity fully, as they travel China and the world, before returning to their own centre on a remote pastoral hillside in Tibet. They fully understand the perils and demands as well as the rewards of modernity, and they now ask the Tibetan pastoralists, who have deep trust in their khenpos, to abstain from the market economy of intensifying production of animals for slaughter. They ask their followers to not enter the industrial commodity chain of meat production, knowing the pastoralists have little to gain and much to lose.

Jigme Phuntsok Rinpoche, founder of the Larung Gar Five Sciences Buddhist Academy says: *"According to legend, the beautiful rainbows in the sky are the bows of the gods. But when we seek them, we gain nothing. Similarly, the flowery and clever words of an ordinary being may well fit the mind-set of other ordinary beings, sounding sonorous and alluring: yet, as they contain not an iota of true practice or realisation, they will not bring much nourishment."*[217]

At a time when more and more Chinese are turning to the Tibetan lamas for spiritual nourishment,[218] while turning to the beef farmers of Australia for physical nourishment, the future of pastoralism in Tibet is in the balance.

217 KhenpoSodargye ed., Always Present: The luminous wisdom of JigmePhuntsok, Snow Lion, 2015, 120

218 Dan Smyer Yu, The Spread of Tibetan Buddhism in China: Charisma, Money, Enlightenment; Routledge, 2011