Tibet is on the frontline of the climate crisis and the effects of climate change on the land and its people are already evident. Even if the world implements the Paris Agreement, signed at COP21 and which would limit global heating to less than 2°C, Tibet will still be disproportionately affected with a temperature rise of nearly three times the global average. Tibetans in the capital city of Lhasa have already voiced concerns that the heat will become unbearable in the near future, while the alarming rise in temperature is due to have catastrophic consequences for over half of the world's population in Asia, who depend on the ten major rivers originating from the Tibetan plateau. The combined effects of heating in Tibet have resulted in glacial melting, expansion of lakes, ground ice thawing and disruption of the water cycle.

Despite these findings, China's plans for colossal river diversion schemes, damming, weather-modification programs, infrastructure development and large-scale mining operations have accelerated as the Chinese government implements policies that marginalise sustainable land management practices of nomadic pastoralism and farming. China's invasion of Tibet in the 1950s and its rise as a global economic power have intensified natural resource extraction in occupied Tibet with both urbanisation and militarisation of its borders. Tibetans demanding their freedom and raising concerns about environmental protection are at risk of being labelled as "separatists", imprisoned, tortured and in some instances killed.

The scientific consensus in the People's Republic of China and beyond demands a critical rethink of these policies. This briefing will highlight how indigenous stewardship of land would better achieve the stated goals of protecting the environment. Tibetans' traditional ecological knowledge system rooted in its animistic beliefs and Buddhism has allowed its glaciers, snow mountains, frozen soil, lakes and rivers to remain intact for centuries and has thus ensured the stability of its diverse ecosystems and year-round freshwater availability for its neighboring countries. This knowledge must be recognised and used to inform environmental policy in the Tibetan Plateau.

1. Throughout this briefing, "Tibet" will mean the historical Tibet inhabited by Tibetans, encompassing three Tibetan named provinces of U-Tsang, Kham and Amdo. The Tibet Autonomous Region, which the Chinese maps depict as being Tibet, forms only half of Tibet. Other Tibetan areas which were incorporated into Chinese provinces are designated as Tibetan Autonomous Prefectures, found in most of Qinghai province, and parts of Gansu, Yunnan and Sichuan: https://freetibet.org/about/location
4. 'South to North Water Diversion Project': https://www.water-technology.net/projects/south_north/
TIBET’S ENVIRONMENT: HIGHLAND OF PURE EARTH, HEADLAND OF RIVERS

Encircled by snow mountains with an average altitude of 4,000 metres above sea level, the Tibetan Plateau, also known as “roof of the world”, rises in the heart of Asia spanning 2.5 million square kilometers, equivalent to 2 percent of the Earth’s surface area. The high-altitude massif containing snow, glaciers and permanently frozen soil (permafrost) is the largest repository of frozen freshwater outside the North and South Poles. This has led Tibet to be described often in the scientific literature as the “Third Pole”.

It is also known as the “water tower of Asia” as ten large rivers originate from the Tibetan Plateau, which are fed by gradual melting snow and ice in spring and summer and flow through Pakistan, India, Nepal, Bangladesh, Burma, China, Laos, Thailand and Cambodia. The watersheds of these rivers are home to 1.9 billion people, who directly depend on them for freshwater supplies. If the number of people fed by agriculture and industry dependent upon these rivers are taken into account, then 4.1 billion people – more than half the world’s present population – depend on water that originates from glaciers in Tibet.

The Tibetan plateau plays a determining role in Asia’s monsoon cycle and also contains three distinct and massive biodiversity hotspots- the Himalaya, the mountains of southwest China, and IndoBurma. Each of these regions are home to at least 1500 vascular plants found nowhere else on Earth and are at threat with 30 percent or less of its original natural vegetation.

IMPACTS OF CLIMATE CRISIS

There is an unequivocal scientific consensus across the world that human activity is driving an accelerating climate crisis. In Tibet, the threats that climate change poses are reflected in the rising temperatures and retreat of glaciers.

Tibet has seen an accelerated heating of the cold and dry climate to a marked contrast of warm and wet climate with loss of cold days. Rainfall has increased by 12 percent with temperature rising by 0.4°C per decade since 1960. 82 percent of glaciers retreated between 1950 to 2000, with glaciers losing mass since the 1970s.
Water from the meltdown of glaciers caused 16 glacial lake outburst floods in three key periods in the 1960s, 1980s and 2000s when the temperature rose above 0°C. Further research using declassified spy-satellite images from the Cold War era concluded that the meltdown rate doubled from 2000 compared to that of 1975 to 2000, when temperatures were on average 1°C lower.

These processes are occurring at the same time as ground ice melt, which has steadily accelerated across Tibet from 1970 onwards. The thawing of permanently frozen soil across the plateau leads to the decomposition of previously frozen organic soil materials and also releases tons of methane into the atmosphere and reinforces the overall warming of atmosphere through the permafrost feedback loop. The shift in the composition of different layers of the soil also causes the water to drop below the reach of the roots of plants, alter local ecosystems and disrupt the water cycle and food security of the wider Third Pole region. The massive infrastructure development of roads, railways and urban enclaves are therefore also at risk of collapsing, a catastrophe which was already observed in other permafrost regions of Siberia.

The early 2000s saw a dramatic expansion of fertile land becoming desert across Tibet: wetlands around river sources turned dry, and grasslands turned to desert. In 2016, an unprecedented twin glacial avalanche took place in west of central Tibetan province of U-Tsang, killing nine Tibetan nomads and more than 110 yaks, followed by a growing number of mud floods and landslides in many parts of Amdo and floods in Kham. The increasing disasters across the three historical provinces of Tibet clearly signal a drastic shift of ecosystem and climate patterns according to reporting by the Tibet Policy Institute.

Without immediate actions, the exponential rise of the temperature will result in the Third Pole's permafrost soil halving to 749,000 km², and almost all of it gone by the end of this century, turning into soil that is either unfrozen or seasonally frozen.
HOW THE CHINESE OCCUPATION OF TIBET EXACERBATES THE DESTRUCTION OF TIBET’S ENVIRONMENT

While scientific reports have documented very clearly the physical process and impacts of the climate crisis on the Tibetan Plateau, far less attention has been paid to the causes driving these disastrous changes. To what extent are these causes due to human impacts? To evaluate this, a short overview of Tibet since its invasion in 1950 and subsequent occupation is necessary.

Historically, Tibetans led a sustainable lifestyle based on farming and nomadic pastoralism. They had lived intimately in nature for thousands of years, and learned how to care and manage their cattle according to the limits of the grasslands and seasons they all depend on. Their inseparable relationship with their land was also infused with their animist belief of Bon as well as Buddhism. Even to this day, Tibetan folk songs, oral histories and prayers are replete with intertwined references to nature which they see themselves part of.

This changed when Tibet was invaded by the Chinese army in 1950. It has been occupied ever since, making it subject to policy dictates devised by the Chinese central government in Beijing. A key and repeated theme of the occupation has been the Chinese government’s portrayal of Tibetans as "backward" and in need of "liberation". Through a systemic social engineering campaign to eradicate the Tibetan identity, Tibetans have been disempowered from practicing policies based on their religion, culture and language, which are indispensable for indigenous stewardship of land and a sustainable future.

Chinese authorities implemented a series of policies from the 1960s onward without consultation with Tibetans nor an understanding of their way of life or connection to the land. Through confiscation of land and herd animals and turning them into concentrated communal production units, the balance of the highly sensitive landscape of Tibet began to see abrupt change in land use and productivity.

The ironically titled Great Leap Forward Campaign (1958-1961), launched to industrialise agricultural economy through collectivisation altered the previously diverse land economy and ownership of Tibetans into a centralised and uniform system. Resistance and revolt spread across Tibet with an estimated death toll of many hundreds of thousands and the spiritual and temporal leader of Tibet fleeing into exile in India in 1959. This is documented in detail in historian Li Jianglin’s 2022 book When the Iron Bird Flies.
In 1962, the historic 70,000 Character Petition was submitted to the Chinese government by the second highest spiritual leader of Tibet, the 10th Panchen Lama. The courageous eyewitness account for which he would later face 14 years of imprisonment or house arrest vehemently critiqued the so-called “democratic reforms” which allowed for unexpected property confiscation and criminalisation of innocent Tibetans. Widespread struggle sessions based on unfounded accusations, torture and transfer of Tibetan prisoners from the plateau environment to unaccustomed lowland as well as north to south, unequal distribution of land and unscrupulous insult of Buddhist scripture took place with destruction of 97 percent of Tibet’s monasteries. Previously unheard cases of Tibetans dying from starvation emerged in the history of Tibet, obliterating some families altogether and one Tibetan telling the Panchen Lama in tears during his fact-finding investigation, “Do not let all living creatures starve! Do not destroy Buddhism! Do not extinguish the people of our snowy land! These are our wishes and our prayers!”

The Grassland Law, which entered into force in 1985, allowed for the fencing of shared grasslands and the establishment of nature reserves and settlements for nomads. A new program of ”The Great Western Development” emerged, prioritising the policy of the “New Socialist Countryside” (under which further policies of “Ecological Migration” and “Comfortable Housing Project” were implemented. These were promoted by the Chinese authorities as efforts to alleviate poverty and fulfil the United Nations Millennium Development Goals. As part of this process, more than 2 million Tibetans underwent an unprecedented relocation in so-called xiaokang (“modest wellbeing”) accommodation.

The rural population of farmers and nomads became ever more centralised into permanent settlements and dependent on the state subsidies. Despite the government labelling the subsidies as “poverty alleviation” and “payment for ecosystem services” or “ecological compensation”, this mass relocation was achieved without truly understanding and listening to Tibetans’ concerns or grievances. The majority of resettled people struggled to make the transition from self-sufficient livelihoods of farming and nomadism to generating an income in an urban environment due to their lack of relevant skills and the considerably higher costs of food and utilities. Financial support promised to the rural Tibetans was not provided and has led to protests and grassroots campaigns against corruption. Demobilising Tibetans ended the core strategy of customary sustainability, which was based on nomadically moving on well before pasture patches were overgrazed.

Lacking the means to meet the costs of the relocation and rehousing, many of those who were relocated were required to sell off some or all of their livestock, while others were left with unmanageable debts. Confiscation of grassland,farmland, mining for natural resources from their sacred mountains and toxic pollution of rivers has also sparked multiple sporadic protests across Tibet.

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23 Human Rights Watch, They Say We Should Be Grateful: Mass Rehousing and Relocation in Tibetan Areas of China, 2013: https://www.hrw.org/sites/default/files/reports/tibet0613webwcoverecover_0.pdf
26 Tibetan Anti Corruption campaigner to appeal seven year sentence, International Campaign for Tibet, 20 December 2019: https://savetibet.org/tibetan-anti-corruption-campaigner-to-appeal-7-year-prison-sentence/
27 Tibet Watch, Environmental Protests on the Tibetan Plateau, January 2015: https://static1.squarespace.com/static/5c6d7c34b2c7f9054327f55/h/5c92799b3e-
While the scale and scope to these protests are far from being uniform across Tibet, the transfer of rural Tibetans often framed as “ecological migration” has accelerated and attracted international concern. The UN Special Rapporteur right to food Mr. Olivier De Schutter criticised the resettlement policy and urged in his 2012 report to “allow for meaningful consultations to take place with the affected communities, permitting parties to examine all available options, including recent strategies of sustainable management of marginal pastures.”

In September 2020, an analysis of Chinese government documents found that, in 2020, half a million rural Tibetans were moved from their lands and put through a process of “military style” re-education to reform their “backward thinking”. The Tibetans were trained in “work discipline” and “work ethics”, before being dispatched across Tibet and China to work in roles such as road construction, cleaning, mining, cooking and driving.

Under such an atmosphere of top-down policies and wrongly assigning blame of grassland degradation on Tibetans, they are repeatedly ordered to show gratitude to the government and praise its policies. Forced confessions of such testimonies used for propaganda are accompanied with a stringent ban on keeping photos of the Dalai Lama and a clear lack of a legal system for Tibetans to address their grievances, file complaints and seek justice. This has resulted in Tibetans protesting for freedom, which has ensued with imprisonment, political re-education and mass arrests.

**CASE STUDY**

Dza Wonpo, a township of around 3,000 Tibetans and 350 monks enrolled in its local monastery, is indicative of the Chinese authorities’ treatment of Tibetans who oppose its environmental and relocation policies. Prior to the visit of Chinese officials touring the region in Kardze, eastern Tibet in autumn 2019, local Tibetans were forced to praise the “Poverty Alleviation” policy and ordered to put the photos of the Chinese Communist Party leaders in their shrines where traditionally Tibetan keep the statue of Buddha and images of the Dalai Lama and other religious leaders. This provoked resentment among Tibetans, who were forced to make difficult choices between reluctantly complying with the orders or refusing to comply and risking reprisals.

On 7 November 2019, four local Tibetans (aged 15 to 20) were detained for protesting in front of the local government and calling for Tibet's independence. This followed with further two Tibetans making social media posts of solidarity for the earlier arrests with photos of the Dalai Lama and they cast leaflets in the sky while calling for Tibetan independence. Sources reported to Tibet Watch that their protests were in response to the Chinese officials touring the region, for which the local Tibetans were forced to praise the “Poverty Alleviation” policy.

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Not only were they arrested and tried and convicted behind closed doors with prison sentences ranging from one to five years, but one of the protestors, 19 year-old Tenzin Nyima, was tortured into a near-death state. Despite his family’s immediate efforts with the community support of “resettled” Tibetans to raise money for his medical treatment, he died on 19 January 2021.30

A security crackdown with house-to-house raids and deployment of military troops and tanks31 were enforced with forced signatures to denounce the Dalai Lama.32 At least 121 Tibetans were arrested en masse between 25 August to 3 September 2021. Before their release from 23 September onwards, they were tortured with instructions to abide by the laws of the nation and beaten into enacting march-past drills and reciting goals and policies of the Chinese Communist Party.33

Online chat groups founded to preserve the Tibetan language and promote environmental protection-of which many of the detainees were part of- were issued a complete ban and they were also ordered to disconnect from Tibetans who continue to live in exile outside Tibet.

CONCLUSIONS AND RECOMMENDATIONS

Tibet forms the core area of the Third Pole, and the changes to its environment have implications far beyond its borders. Given its location in the heart of Asia, Tibet needs urgent international focus, with recognition that its land and people face threats from climate change but also the policies of the occupying Chinese government. International governments must recognise Tibet as being the centre of Asia’s water and food security and recognise that Tibetans are pivotal to any discussion of regional and international climate policy, particularly any discussions around environmental policy across the Tibetan Plateau.

Representation at fora such as COP26 cannot be left to the Chinese government, given that its policies inside Tibet directly threaten its ecosystem and people. An interdisciplinary team of Tibetan experts must therefore be involved at all levels of local and international research collaborations and political decision making. Tibetans’ indigenous knowledge system, grounded in their culture, language and religion, must form the baseline indicators of human development, conservation and sustainability criteria. These experts exist and will be present in Glasgow for COP26. They need to be recognised and platformed.

Local Tibetan village leaders and religious figures are key grassroots agents negotiating adaptation strategies and settling disputes amongst Tibetans in times of social conflicts and vulnerabilities resulting from loss of shared resources of grasslands. Their leadership role is indispensable and must be heeded, given due respect and followed by higher authorities.

31 Counterterrorism Police ‘CleanUp’ after Tibetan monk’s death, Human Rights Watch, 7 April 2021: https://www.hrw.org/node/378438/printable/print
32 See Human Rights Watch’s translation of the document issued to Tibetans of Dza Wonpo to denounce the spiritual leader of Tibet: https://www.hrw.org/sites/default/files/media_2021/04/202104asia_china_fivethings.pdf
The status quo in Tibet is unsustainable. For example, China’s latest Five-Year Plan (2021-2025)\(^{34}\) calls for implementing “orderly withdrawal” of rural Tibetans from their lands in areas designated as biodiversity core conservation zones. Tibetans have not been granted any free, prior and informed consent over such policies, which would lead to further mass displacement of people.

China has shown a systematic and deliberate failure to steward Tibet’s environment and to respect and adhere to the environmental expertise of Tibetans about Tibet. Given this, and the enormous significance of Tibet’s environment to our planet, any state parties that seek a climate agreement must recognise that stewarding Tibet’s environment is so significant that a global climate agreement will be incomplete if it does not take this into account. Ultimately this will require a Tibet where freedom of expression and ultimately self determination for the Tibetan people is a reality.

The answer to the twin threats posed by climate change and Beijing’s top-down policies is a rights-based approach to the climate crisis, which would centre the human rights of the Tibetan people. This would not only ensure the necessary transition to reducing carbon emissions but would also require any development in Tibet to be based on legal protection granted for Tibetans and their indigenous knowledge.

International organisations, governments and civil society should, through various channels and cooperation, make strong public statements of support and advocate for the rights based approach to Tibet’s climate crisis. They can facilitate this rights based approach through the following actions:

- **Calling for a moratorium on water-diversion projects, hydroelectric dam construction and weather modification schemes.**
- **Investigating companies profiting from the supply chain of conflict minerals in Tibet and holding those responsible for such practices accountable.**
- **Pressing China to respect the rights of Tibetans to protest for freedom and express their concerns of environmental harm, corruption of their compensation and land confiscation.**
- **Urging China to ensure that local Public Security Bureaus refrain from detaining, imprisonment and torture of Tibetans for their non-violent and peaceful protests.**
- **Insisting that subsidies of poverty alleviation and payment of ecosystem services must be directly provided to Tibetans and not used as tools to punish their dissent. Likewise, issues around land tenure for Tibetans must be urgently resolved through meaningful consultation with affected populations.**
- **Pressing China to allow meaningful consultations with Tibetans who are affected by its environmental and land policies, before, during and after policy design and implementation. This must include a thorough environmental and social impact assessment, and free, prior and informed consent from Tibetans on any policies taking place on their land.**

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\(^{34}\) Gabriel Lafitte, ‘Villagisation of Tibetan Nomads and intensive urban construction workforce training, On the scaffold: Concretising Tibet’, Rukor: https://rukor.org/

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