

# The World's 'Third Pole:' Tibet and Climate Change

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**FROM A GLOBAL ENVIRONMENTAL PERSPECTIVE**, few places in the world are as important as the Tibetan plateau. Encompassing an area of over 2.5 million square kilometers, the Tibetan plateau is the largest and highest plateau on earth. With an average elevation of 4,500 meters above sea level, Tibet is encircled by high mountains—the Himalaya to the south, the Karakorum in the west and the Kunlun across the north.

Tibet, often referred to as the 'roof of the world' or the 'world's third pole' because it contains the biggest ice fields outside of the Arctic and Antarctic, is threatened by melting glaciers and other extreme weather phenomena. Scientists believe that the Tibetan plateau offers an early warning of climate change and it is therefore a critical global climate barometer. Because Tibet plays a prominent role in the Asian monsoon system, the consequences will affect the lives of millions of people downstream as well as those on the high plateau.

The plateau is the source of most of Asia's greatest rivers, including the Yellow, Yangtze, Mekong, and Indus, and the water they provide is critical to the survival of millions of people downstream. What happens in Tibet has profound implications for hundreds of millions of people, not only in China itself, but in neighboring countries.

China is now pursuing massive inter-basin and inter-river water transfer projects in Tibet which threaten to cause further damage to the plateau's fragile eco-system. China plans to build nearly one hundred dams across the Tibetan plateau and several water diversion projects to move water into northern and eastern China; these projects disrupt already-overstressed water supplies of hundreds of millions of people in south and southeast Asia. China's neighbors view these plans—at least one of which is backed by Chinese President Hu Jintao, a hydrologist by profession—with increasing disquiet.

A number of biodiversity 'hotspots' and eco-regions are located on the Tibetan plateau. With their distinctive species, ecological processes, and evolutionary phenomena, these areas are some of the most important areas on earth



**There are few environments on earth as critical as the Tibetan plateau.**

for conserving biodiversity. The Tibetan plateau also includes the most intact example of mountain rangelands in Asia with a relatively intact vertebrate fauna, and is one of the largest remaining terrestrial wilderness regions left in the world. The region supports rare and endangered wildlife species such as the wild yak, Tibetan wild ass, Tibetan antelope, Tibetan argali and snow leopard. Due to extensive resource extraction, poaching and unsustainable development, many of their species are now endangered. Conserving these animals and their habitat is an important priority for the global community.

The Tibetan plateau is one of the earth's important grazing ecosystems, encompassing about 1.65 million square kilometers of grazing land. It contains the highest grasslands in the world and with a severe climate, it is one of the world's harshest grazing environments, yet these pastures supply forage for an estimated 12 million yaks and 30 million sheep and goats and provide livelihood for Tibetan pastoralists and agro-pastoralists. More than 80% of Tibetans live in rural areas, and for centuries, the majority has sustained themselves through a nomadic herder lifestyle, uniquely adapted to the harsh conditions of the fragile ecosystem of the Tibetan plateau.

*(over, please)*



**New railway bridge to Lhasa – the railroad, opened in July 2006, has encouraged the influx of many more Chinese workers, further marginalizing the Tibetan population and threatening fragile Tibetan eco-systems.**

The implementation of Chinese government policies to settle Tibetan nomads and to resettle Tibetans in towns is now threatening the livelihoods of hundreds of thousands of people and imperiling the Tibetan landscape. These policies, based on an urban industrial model and imposed by planners in Beijing, are counterproductive: they have made nomads poorer and degraded Tibet's vast grasslands. Scientific research has established that the mobility of the herds keeps the grasslands healthy, that taking the nomads off the land does not help conserve water resources, and that herdspeople denied their livelihood become demoralized and dependent. One of the last examples of sustainable nomadic pastoralism on this planet faces extinction unless this policy is soon changed.

Tibet's precious high-altitude environment is increasingly endangered by Chinese government policies. Conserving the environment of the Tibetan plateau requires a better

understanding of its unique ecology and collaboration of all of the people who have a stake in the future of Tibet. The challenge is to balance the diverse economic, cultural and social needs of the inhabitants of the Tibetan plateau with the need to maintain the environment and conserve the biodiversity and cultural heritage of the landscape. This calls for strengthened participation by Tibetan communities in the development process. It also requires that indigenous knowledge is better understood, including the efficacy of many traditional natural resource management practices.

Tibet's harsh and rugged climate masks a fragile ecosystem that is vulnerable to the effects of global climate change—studies have found the effects of global climate change more pronounced at higher elevations. The many civil engineering projects in Tibet, such as construction of the railroad, combined with a conscious effort by China to urbanize the Tibetan plateau, will lead to further and likely greatly accelerated population increases and land surface changes in the future.

Meteorological disasters exacerbated by global warming such as the rising of the snowline, the retreat of glaciers, the northward movement of permafrost, the loss of grassland, the eastward spread of desertification and the loss of biodiversity, are all posing an ever greater threat to Tibet's ecological systems.

For recommendations on a way forward for Tibet, see "Tracking the Steel Dragon: How China's economic policies and the railway are transforming Tibet," available at: [www.savetibet.org/documents/reports/tracking-steel-dragon](http://www.savetibet.org/documents/reports/tracking-steel-dragon).