



SADF COMMENT

## Further Environmental Degradation in Tibet and Implications for Asia

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While monsoon is largely a South Asian phenomenon, it cannot be decoupled from Tibet, as the entire phenomenon is dependent on the Tibetan Plateau. The ecological role and global significance of the Tibetan Plateau is brought out from the terms used for it, ranging from the 'Roof of the World', 'Third Pole', the 'Water Tower of Asia' and the 'Rain Maker'. [The Plateau](#), at an average elevation of more than 4000 meters above sea level, with an area of 2.5 million square kilometres, about 2 per cent of the earth's land surface is the world's highest and largest plateau on the Earth. With 46,000 glaciers covering an area of 105,000 kilometres, the Plateau is the third largest reservoir of ice after the North and the South Poles, as well as the largest source of accessible fresh water on Earth. Tibet supplies fresh water to multiple countries ranging from Afghanistan to Cambodia to Vietnam. Tibet also is a treasure trove of minerals and has abundance of precious minerals like gold and silver. Tibet has China's largest deposit of at least 10 different minerals, and this is precisely the reason why China has turned Tibet as the centre of its mining activities.

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**Keywords: Environment, Climate Change, Water management, Tibet, China**

In analysing the ecological degradation of the Tibetan Plateau, [Warren Smith of Radio Free Asia](#) aptly divides Chinese activities in four phases. The first was an exploitation of oil and gas along with exploitation of minerals such as chromium and bauxite in the Tsaidam Basin- the lowest altitude area of the Tibetan Plateau. It was the first part of Tibet accessed by railroad. The second phase was the environmentally degrading gold rush of the 1980s and the 90s, mostly by small-scale private individuals in the rivers of Kham and Amdo. The third stage began with the large-scale mining by Chinese government organisations such as the People's Armed Police or by state-owned enterprises. The fourth stage of natural resource mining in Tibet has [only just begun](#), but this sort of large-scale mining is an essential part of the Chinese plan for the future of Tibet. Industrial-scale mining of more rare minerals, such as copper, require large amounts of electricity in order to do preliminary refining of the ore, and railroads to transport the ore to China. Following the [opening of the Golmud-Lhasa](#) railway line in 2006, there has been a massive boom in mining operations on the Tibetan plateau.

All in all, the environmental crisis in Tibet can be categorised into three types of calamities: of natural resources, environmental and climate. All of these have major implications for Asia as well as for the Northern Hemisphere of the Earth. During the summers, the Plateau heats up and the low pressure created attracts monsoonal currents from Asia. In winters, the Plateau deflects the cold jet stream to the higher Himalayas, causing snowfall in the higher ranges. Climate change due to environmentally degrading activities will have severe impacts on the Asian monsoon and the Himalayan glaciers. Glacial melting accompanied by increasingly unpredictable rainfall will have severe negative consequences for food and water security beyond the future of energy supplies in the region.

Various [studies](#) reveal that the monsoon is erratic in four out of every 10 years. In 2012, specialists found a 4.5 per cent decline in monsoonal rain in the three decades to 2009. [The simulations](#) from the World Climate Research Programme's Third Coupled Model Inter-comparison Project predict that climate change will result in increased monsoonal precipitation over South Asia, East Asia and the western Pacific Ocean.

Increased urbanisation and infrastructural development, such as Qinghai-Tibet railways for example which runs across the shifting permafrost of the Plateau will produce adverse effects of global warming. Additionally, China is now pursuing extensive inter basin and inter river water projects in Tibet, which threaten to further damage 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 will disrupt already-overstressed water supplies of hundreds of millions of people in South and southeast Asia.

**At least one in every five people in South Asia does not have access to safe drinking water.**

With the regional population expected to exceed 2.2 billion by 2050, expanding access to safe water sources will prove challenging. The [predicted decrease](#) in water availability induced by climate change in Tibet, therefore, will only exacerbate the situation. Some of [the plans for Tibet in 2016](#) included building a second railway connecting Tibet with other parts of the country. The railway is between Lhasa and Chengdu. According to reports, the new railway will be about 1,629 km long, and it will only take 15 hours for trains travelling between Lhasa and Chengdu. An investment of 3.6 million Yuan has been made for infrastructure construction and basic operations on the Qinghai-Tibet highway. Increased exploitation of the Plateau, as seen from the previous examples will have an adverse impact on climate as well as on ecology.

While China is an important player in international politics and even more so in climate negotiations, its hedonistic policies in Tibet imply that domestic development and economic growth concerns precede multilateral approaches to tackle the global threat of climate change. In emphasising the need to ensure a future with reduced perils of climate change a more sensitive approach to policies of so called development in Tibet is required so that the ‘Roof of the World’ remains the roof and does not get reduced to dust.

### *Biography of the author*

**Dr. Sriparna Pathak** is a Consultant in the Policy Planning and Research Division of the Ministry of External Affairs, New Delhi. She is fluent in English, Hindi, Mandarin, Bengali and Assamese. She has previously worked as an Associate Fellow at Observer Research Foundation in New Delhi and Kolkata respectively. Dr. Pathak got her PhD from Jawaharlal Nehru University, New Delhi and has spent two years in Beijing as an Advanced Research Scholar on a joint scholarship from the Ministry of Human Resources Development, India and the China Scholarship Council. She has written extensively on China’s economy, India- China relations and China’s international relations in books, journals, and national dailies.