

The Significance of Tibet in the Climate Change Debate

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In the climate change debate, small changes can have enormous consequences. Many would consider the increase of carbon dioxide in the atmosphere from 280 parts per million (ppm) in the period from the end of the last ice-age to 400ppm in 2013 to be a small change, and yet the consequence even now for people in the Philippines who have experienced super typhoons such as Haiyan (November 13) and Hagupit (2014) are horrendous.

Small countries such as Tibet in Asia can also play a crucial role in climate change. Tibet is often called ‘the roof of the world’ because it is the highest country in the world. It is also home to more than 46,000 glaciers covering 105,000 square kilometres which store more fresh water than any place in the world apart from the Arctic and Antarctic regions. This is why the Tibetan plateau is sometimes called the ‘Third Pole.’ It is also often referred to as the ‘Water Tower’ of Asia because its glaciers feed the major rivers of Asia— the Indus, the Ganges, the Brahmaputra, The Salween, the Mekong, the Yangtze and the Yellow river. These rivers provide water for 1.3 million people across ten different countries.

Unfortunately, the glaciers on the Tibet Plateau are warming twice as fast as in many other parts of the world. This has led to extreme weather conditions in many parts of Asia, but most of all scientists fear of what will happen if the glaciers in Tibet are reduced significantly in the coming decades as a result of global warming. Reports claim that Tibet’s glaciers have shrunken by 6,600 square kilometres in the past 40 years. If the warming in the area continues, there is the credible fear that water flow in the rivers which depend on glacial melt will become seasonal with horrible consequences for hundreds of millions of people who will be deprived of water for weeks or months each year.

Another consequence of warming is the increase in the number of glacial lakes in the Himalayan region which for as the ice is melting. It is now estimated that there are now more than 8,790 glacial lakes with more than 200 classified as potentially dangerous. When glacial lakes bursts, a tsunami of water and ice cascades down stream into the lowlands wiping out houses, road and bridges. This brings death and misery to tens of thousands of people.

Permafrost covers much of the Tibetan highlands and according to reliable estimates it stores about 12,300 million tons of carbon and methane. Further warming will degrade the permafrost and release dangerous amounts of carbon and methane into the atmosphere, thus intensifying climate change around the globe.

In recent years the melting of glaciers and permafrost has destabilized many hillsides causing huge landslides. In 2003, for example, a landslide created a dam which completely blocked the Pareechu river, a tributary of the Sutlej river. Eventually, the dam burst in 2005 causing severe destruction to infrastructures in both Tibet and India. As a result many people lost their livelihoods.

Warming associated with climate change is also affecting Tibet's famed grasslands. Because of warming a 2007 report from the United Nations Development Programme (UNDP), claimed that Tibet's grasslands are turning into deserts at the rate of 2,330 square miles per year. This is affecting pastoralists and their herds who, because of their extensive knowledge of the dynamics of grasslands, have grazed them sustainably for 8,000 years.

So, every aspect of life in Tibet has and is being affected by climate change. The consequences, particularly as warming intensifies, will be catastrophic for the natural world and tens of millions of people who live in Tibet and south Asia.

(The data used above is taken from “The Significance of Tibetan Plateau. Environment and Development Desk, Tibet Policy Institute, General Tibetan Administration, Dharamshala -176215, H.P. India.