Climate Change on the Third Pole: Asia's Water Supply in Danger

The Third Pole is melting. The Third Pole sits at the heart of Asia, mostly on the Tibetan Plateau, and contains the world's largest mass of frozen freshwater outside of the Arctic and Antarctic. It provides drinking water for 225 million people, supplements the water supply of 1.9 billion people and irrigates the farms that feed 4.1 billion people. Water from the Third Pole is also used in factories that produce goods for consumers all around the world. Any reduction in the water supply would directly impact half the world's population and indirectly affect all of us.

However, the water supply is not just reducing, it is running out. If climate change continues at its current rate then the impact of the melting will reach catastrophic levels within a few decades. This is likely to include flooding, drought, famine, mass migration and armed conflict. It is vital that nations and environmental experts come together now to prevent this.

Introduction - Third Pole Climate Inquiry

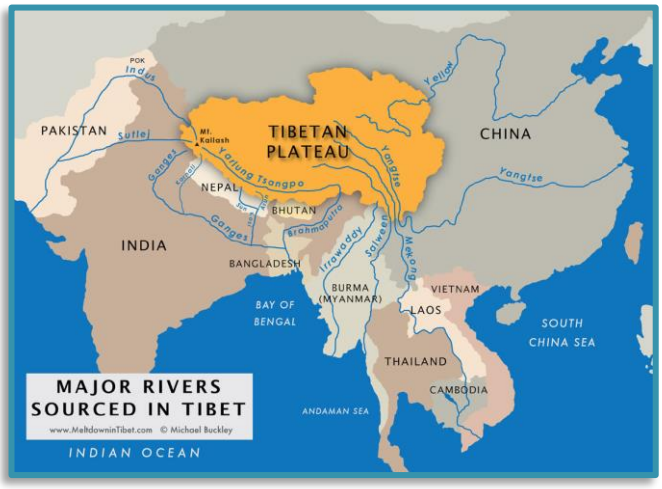
The Cross Party Group on Tibet (CPGT) concentrates on a wide variety of issues - from the history of human and civil rights violations in the region, the increasingly embattled status of Tibet's unique culture, language and religion, and over six decades of protest against Chinese policy on the Plateau, to the mass resettlement and relocation of Tibetan communities, particularly nomads. Over the last twenty years, however, it has become clear that most of these issues revolve around growing instabilities and changes in both Tibet and the surrounding region's environment. Indeed, environmental damage has been cited as one of the main grievances underlying Tibetan protests, including many of the over 150 self immolation protests which have occurred during the past decade.

Early in 2020, the CPGT initiated the Third Pole Climate Inquiry and commissioned the Scotttish Centre for Himalayan Research (SCHR) to look into the causes and impacts of climate change in Tibet and the wider Third Pole region. The SCHR has recently summarised their research to date in a working paper, Climate Change on the Third Pole, which is available on the CPGT website.

The Third Pole - Asia's Freshwater Supply

The world's largest mass of frozen freshwater outside of the polar regions can be found in Asia at an altitude of 4,000 meters above sea level. It covers an area nearly the size of Europe, encompassing the Tibetan Plateau and its surrounding mountain ranges, including the Himalayas. The realisation of how much water is contained within the region's glaciers, snow and permanently frozen ground (permafrost) has led to the region becoming known as the 'Third Pole'. The other feature which this area shares with the north and south poles is that it is melting at an alarming rate.

Unlike the north and south poles, where the melting ice will lead to a rise in sea levels, the location of the Third Pole means that its melting will endanger water and food supplies for over half the world's population. The aftermath and the indirect effects are likely to reach all of us.



All of Asia's major rivers originate in the Third Pole region. As the map shows, water from the Tibetan Plateau flow through Pakistan, India, Nepal, Bhutan, Burma (Myanmar), Thailand, Cambodia, Laos, Vietnam and China. In total, 225 million people are directly dependent on these rivers for their water supply but a far larger number, approximately 1.9 billion, are at least partially reliant and would be adversely affected by any change in supply. Moreover, the rivers also provide irrigation for agriculture and 4.1 billion people, over half the world's population, rely on food produced with Third Pole water.

The relationship between the Third Pole region and all of these rivers has traditionally been circular. During Asia's dry season, the warmer weather gradually melts the glaciers and other ice sources. This provides a steady flow of water into rivers that would otherwise dry up in the absence of rain. At

other times of the year, rain which is drawn into the higher mountainous region of the Third Pole falls as snow or becomes ice on the ground. This tops up the glaciers before the process begins again.

The Impact of Climate Change

The impact of climate change on this process is two-fold. Warmer summers mean that the glaciers are melting faster. The impact of this will range from slightly fuller rivers to catastrophic flooding. Warmer winters mean that less ice is formed and the glaciers are not topped up. This means less water during the dry season, with impacts ranging from water restrictions to drought and famine. In short, the ice that generates water for 4.1 billion people is melting faster than ever before and is not being replaced. Once the current supply is gone, millions of people across several countries will face severe water shortages.

The pace of global warming is not uniform and recent research has shown that the temperature changes occurring in the Third Pole region are happening twice as fast as the global average. Altitude also affects the pace of change and some studies report temperature increases in the mountains of eastern Tibet that are four times higher than the global average for sea level areas. It appears that climate change is happening fastest in the areas where it will cause the most damage.

The CPGT is naturally concerned about the specific impact on the people of Tibet. However, the group is very much aware that the impact of climate change on the Third Pole will extend far beyond Tibet itself. The SCHR's working paper details the significant number of people who will find themselves without water, the even greater number who will find their supply severely restricted and the alarming number who will face food shortages in the absence of water for agriculture. The role of water scarcity as a trigger for conflict is well documented and the risk of climate change in the Third Pole region leading to regional or even international conflict is high. It is also likely that the areas most severely affected by climate change will eventually become incapable of sustaining their current populations, leading to mass migration and creating the potential for further conflict.

Conclusion & Recommendations

Scotland's Response

Noting the content of the SCHR report, the CPGT of the parliamentary session 2016-21 calls on colleagues in the forthcoming Scottish Parliamentary session to:

- Acknowledge the strategic importance of the Third Pole, particularly in an environmental context.
- Acknowledge the need for international cooperation in tackling climate change in this region.
- In light of Scotland's ongoing relationship with China and our mutual recognition of the importance of climate change, encourage the sharing of relevant data and the facilitation of access to the Third Pole region for environmental experts.
- Recognise that the 2021 UN Conference on Climate Change (COP 26) will provide unique opportunities for diplomacy and for getting key messages across to an international audience and take full advantage of this to publicise the findings of the SCHR report and promote an urgent and unified response.

The members of the CPGT sincerely hope that the group will be in a position to reconvene after the 2021 election and expect climate change to remain a priority issue in the new session. The CPGT members invite and encourage colleagues from all parties to join them in continuing this vital work.

The UK and International Response

The CPGT commends the SCHR report to political colleagues across the UK and internationally. The group would encourage all nations to acknowledge the strategic importance of the Third Pole and the need for international cooperation in tackling climate change in this region. Similarly, the group would encourage all nations to promote the sharing of relevant data and the facilitation of access to the Third Pole region for environmental experts.

The CPGT would also invite and encourage the UK government to ensure that the issue of climate change in the Third Pole is addressed within the context of COP 26.