Environmental change on the Tibetan Plateau

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Environmental change on the Tibetan Plateau not only affects the region itself, but also influences the living environment of the inhabitants in East Asia, Central Asia and the South Asia, even that in the Northern Hemisphere and the globe as a whole.

Notably, environment on the Tibetan Plateau are undergoing tremendous changes against global warming. Above all, global warming has brought on changes of glaciers, lakes, wetland and grassland on the plateau, thus caused numerous natural disaster in this regard. Take glacial change, which has decreased over 30% since early last century. Due to global warming, glacial retreat has picked up speed from 1990s onward. The accelerated glacial retreating is exerting impact on lake variation on the Tibetan Plateau. In the past decade, most lakes on the plateau have risen. However, precipitation on the plateau is different from the north to the south, in a way that it increases in the north whilst decreases in the south, which denies precipitation as a root for lake rise in much of the Tibetan Plateau.

Bearing these in mind, we should carry out our study concerning Tibetan Plateau in the following aspects: (1) modern geomorphology and environmental evolution; (2) temporal and spatial features of paleo-environmental change; (3) cryospheric change and water-energy circulation process; (4) interactions between modern accumulated snow, glacier and lakes and their responding mechanisms to climate change; (5)influence of plateau landform, land-surface process and heat source effect on major East Asian and South Asian climate systems in China; (6) reactions of ecosystem to climate change; and (7) measures to mitigate disasters and adapt to these variations.