Special Section on the Qinghai-Tibetan Plateau

Active-layer detachment slides (solifluction slumps) on an east-facing slope near Wudaoliang along the Qinghai-Tibetan Highway. The active-layer detachment slide was initiated by a surface disturbance of a slope cut when the Qinghai-Tibetan Highway was reconstructed in this area in the late 1990s. The surface disturbance caused the ice-rich permafrost and the ground ice layer to become exposed to the atmosphere, resulting in rapid thawing of the permafrost, melting of the ground ice, slumping of the slope surface, and mudflows. The initial small surface disturbance of this slope cut has caused a huge active-layer detachment slide of up to several square kilometers. This kind of solifluction slump and related thermokarst phenomena can be found in many places along the Qinghai-Tibetan Highway, and their impacts on ecosystems and infrastructures cannot be underestimated. The picture was taken on 1 September 2007. Text and caption by Tingjun Zhang.