**Dataset Name:**

Permafrost, Active layer Thickness and Soil Organic Carbon Maps over the Tibetan Plateau

**Uploader:**

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**Description:**

Using recent observations of mean annual ground temperature (MAGT) at or near (the closest to) the depth of zero annual amplitude, active layer thickness (ALT) and soil organic carbon (SOC) at different depth measured during the baseline period (2006-2015) over the Tibetan Plateau (TP), we estimate the permafrost distribution over TP, as well as the ALT and SOC distribution across the TP permafrost region during the same period using data-driven approaches. For more details, please refer to our manuscript in Science Advances.

This datasets include four directories, which are respectively:

1. Permafrost Map

Permafrost distribution in the baseline period (2006-2015)

Value 1 denotes permafrost, value 2 denotes non-permafrost

1. ALT Map

Active layer thickness in the baseline period (2006-2015)

unit: m

1. SOC Map

0-3 m Soil organic carbon distribution in the baseline period (2006-2015)

unit: kg/m2

1. TP Scope:

A shape file for the scope of Tibetan Plateau.

**Reference:**

Wang, T., Yang, D., Yang, Y., Piao, S., Li, X., Cheng, G., & Fu, B. (2020). Permafrost thawing puts the frozen carbon at risk over the Tibetan Plateau. *Science Advances*, 6(19), eaaz3513.