

Evaluating the Effects of Climate Change and Human Activities on the Seasonal Trends and Spatial Heterogeneity of Soil Moisture

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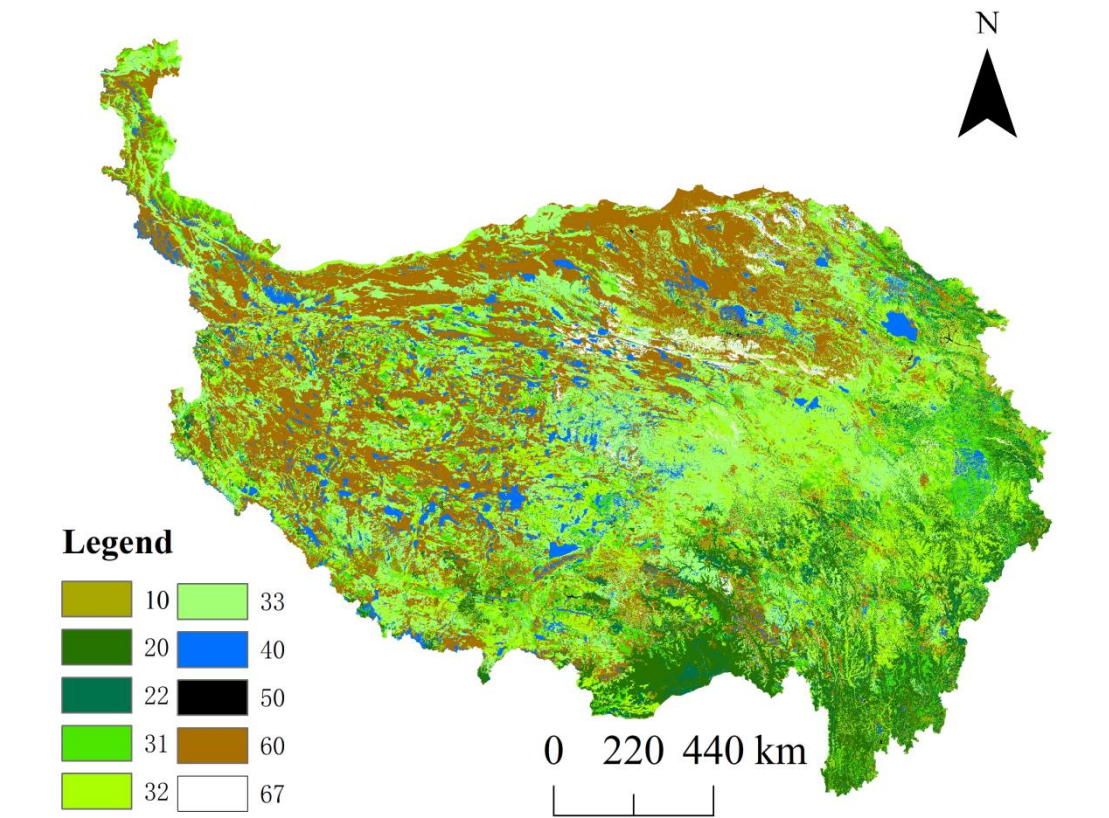


Figure S1. Land covers on the Tibetan Plateau in 2020. The legend numbers correspond to the land cover codes

Table S1. Lookup table of land cover classes in the Tibetan Plateau

| Code | Name | Number in original data | Code | Name | Number in original data |
|------|----------|-------------------------|------|------------------------|-------------------------|
| 10 | Tillage | 12 | 33 | Low coverage grassland | 33 |
| | Dry land | | | Low coverage grassland | |

| | | | | | |
|----|---------------------------|---|----|--------------------------|--|
| 20 | Woodland | 21 Forested land, 23 Sparse woodland, 24 Other woodland | 40 | Water | 41 River channel, 42 Lake, 43 Reservoir pit, 44 Permanent glacier, 46 Shoal, 64 Wetlands |
| 22 | Shrub | 22 Shrubbery | 50 | Construction land | 51 Urban land, 52 Rural resident, 53 Other construction land, 61 Sandy land、62 Gobi, |
| 31 | High coverage grassland | 31 High coverage grassland | 60 | Sand, Gobi and Bare land | 63 Saline-alkali land, 65 Bare land, 66 Bare rock texture |
| 32 | Medium coverage grassland | 32 Medium coverage grassland | 67 | Desert | 67 Other unused land, including alpine desert, tundra, etc. |

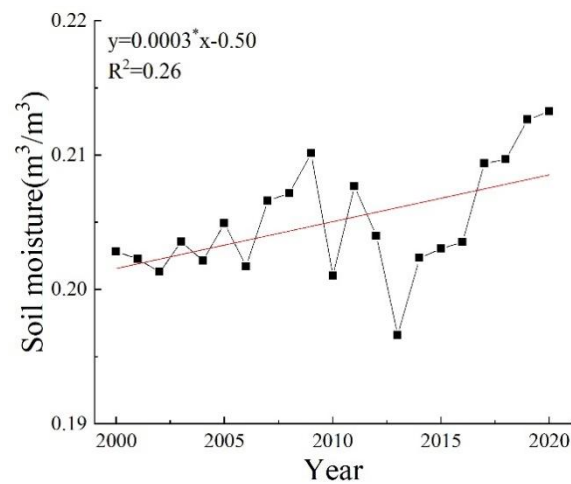


Figure S2. Annual variation of soil moisture from 2000 to 2020. * was the significance of 0.05 level.

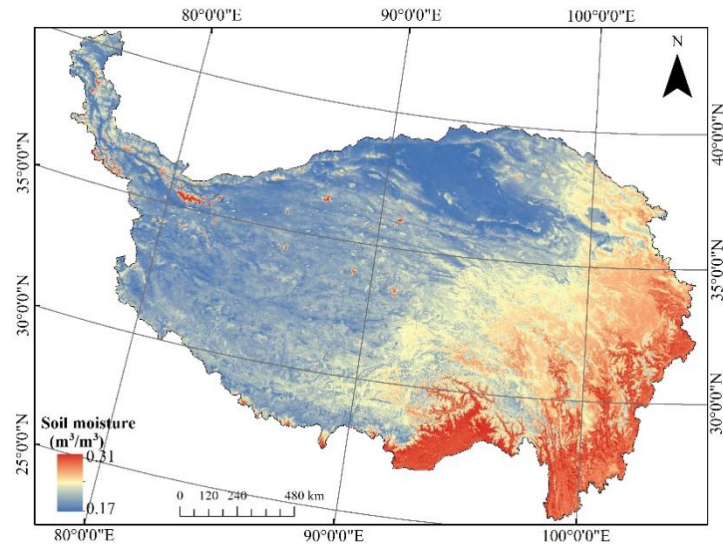


Figure S3. Spatial distribution of mean annual soil moisture of the Tibetan Plateau from 2000 to 2020.

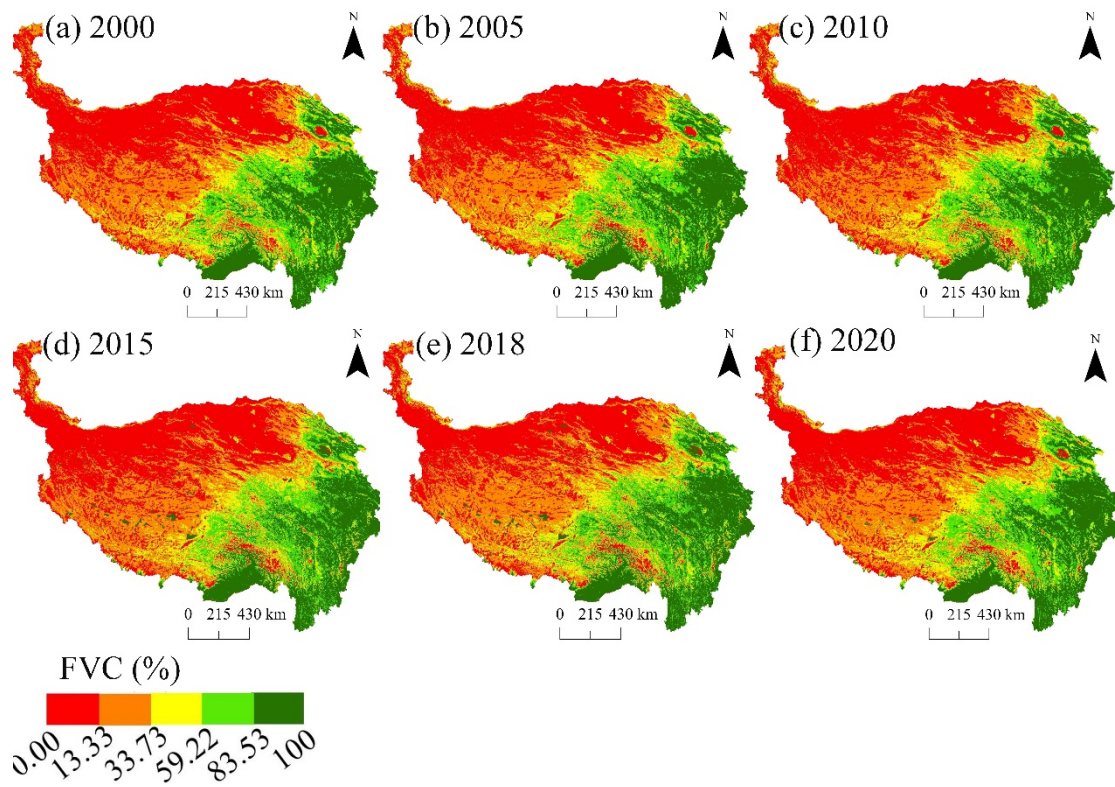


Figure S4. Spatial distribution of fractional vegetation coverage in the Tibetan Plateau from 2000 to 2020.