**Table S1. Locations and soil samples characteristics in bulk soils.**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sample Name** | **Location****(longitude)** | **Location****(latitude)** | **CECa** **(cmol kg −1 )** | **TPb (g kg −1 )**  | **APc (g kg −1 )**  |  **TNd (g kg −1 )**  |  **HNe (g kg −1 )**  | **pH** |  **SOMf (g kg −1 )**  |
| Bulk\_CK | 119.63277 | 31.39900 | 15.87±3.01 | 0.087±0.011 | 32.8±1.6 | 0.200±0.035 | 349±65 | 6.55±0.82 | 42.6±3.4 |
| Bulk\_VMC | 119.69524  | 31.41221  | 20.10±2.83 | 0.088±0.013 | 32.0±4.0 | 0.202±0.017 | 209±59  | 5.57±0.21 | 37.9±2.9 |
| Bulk\_MC | 119.68853  | 31.41118  | 19.08±0.19 | 0.126±0.044 | 50.3±3.9 | 0.159±0.018 | 122±34 | 5.44±0.11 | 24.8±2.1 |
| Bulk\_SC | 119.69327  | 31.40853  | 20.86±4.86 | 0.047±0.004 | 9.83±1.3 | 0.105±0.017 | 155±26 | 6.79±0.31 | 18.5±1.7 |

**a** Cation exchange capacity

**b**Total phosphorus

**c**Available phosphorus

**d**Total nitrogen

**e**Hydrolyzable nitrogen

**f**Soil organic matter

Values are means ± standard deviation (n = 6).