**Significant impacts of both** **total amount and availability of heavy metals on the** **functions and assembly of soil microbial communities in different land use patterns**

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**Table S1.** Latitude and longitude of sampling sites in the studied areas.

|  |  |  |
| --- | --- | --- |
| **Site** | **latitude** | **Longitude** |
| OF\_SM | 24°42'21.10" | 113°38'48.43" |
| OF\_CFPP | 24°35'15.42" | 113°34'58.15" |
| OF\_SP | 24°43'17.50" | 113°34'29.66" |
| MF\_PS | 24°31'16.82" | 113°41'51.15" |
| MF\_US | 24°33'25.93" | 113°41'43.84" |
| MF\_MS | 24°33'19.10" | 113°42'58.80" |
| FF\_P | 24°52'17.90" | 113°32'17.83" |
| FF\_E | 24°47'54.65" | 113°35'27.77" |
| FF\_S | 25°7'33.25" | 113°21'5.68" |

**Table S2.** Sequencing raw data and α-diversity in different areas.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sample** | **Effective Tags** | **OTU Number** | **Shannon** | **Chao1** | **Faith PD** |
| OF\_SM | 25281 | 2572 | 6.87 | 5946 | 137.25 |
| OF\_CFPP | 29647 | 2757 | 6.86 | 7931 | 149.04 |
| OF\_SP | 27945 | 2879 | 6.96 | 6201 | 154.20 |
| MF\_PS | 24225 | 2326 | 6.37 | 4519 | 112.74 |
| MF\_US | 22772 | 2196 | 5.99 | 4122 | 110.17 |
| MF\_MS | 19633 | 1961 | 5.21 | 4382 | 115.65 |
| FF\_P | 31158 | 2935 | 7.58 | 6100 | 161.61 |
| FF\_E | 36672 | 3263 | 8.42 | 6590 | 162.63 |
| FF\_S | 34752 | 3085 | 8.39 | 6855 | 161.11 |



**Figure S1.** Available HMs across different land use patterns. (A) Cu, (B) Pb, (C) Zn, (D) Cd, (E) Cr and (F) Ni. Data are mean ± standard deviation (SD) obtained from five replicates. Bars with different lower-case letters refer to significant differences (ANOVA, Duncan's test, p<0.05) among the samples and the same letter indicates no significant difference.