As shown in Figure. S1 (a), the blue grids represent the 5°×5° grids for the PCG classification processing, while the red grids stand for the 1°×1° grids that contain the PCG classification results. Figure. S1 (b) shows these nine grids within the yellow circle in Figure. S1 (a), and their *'id'*'s are 1713, 1714, 1715, 1785, 1786, 1787, 1857, 1858, and 1859. As shown in Figure.S1 (c), no missing grids in 1787, means that all 25 grids contain PCG classification results. Figure. S1 (d) shows that in grid 1713, only grids 1, 6, 7, 8, 10, 13, 14, 15, 18, 22, and 23 contain PCG classification results, which means that only above 11 1°×1° grids contain PCG classification results.
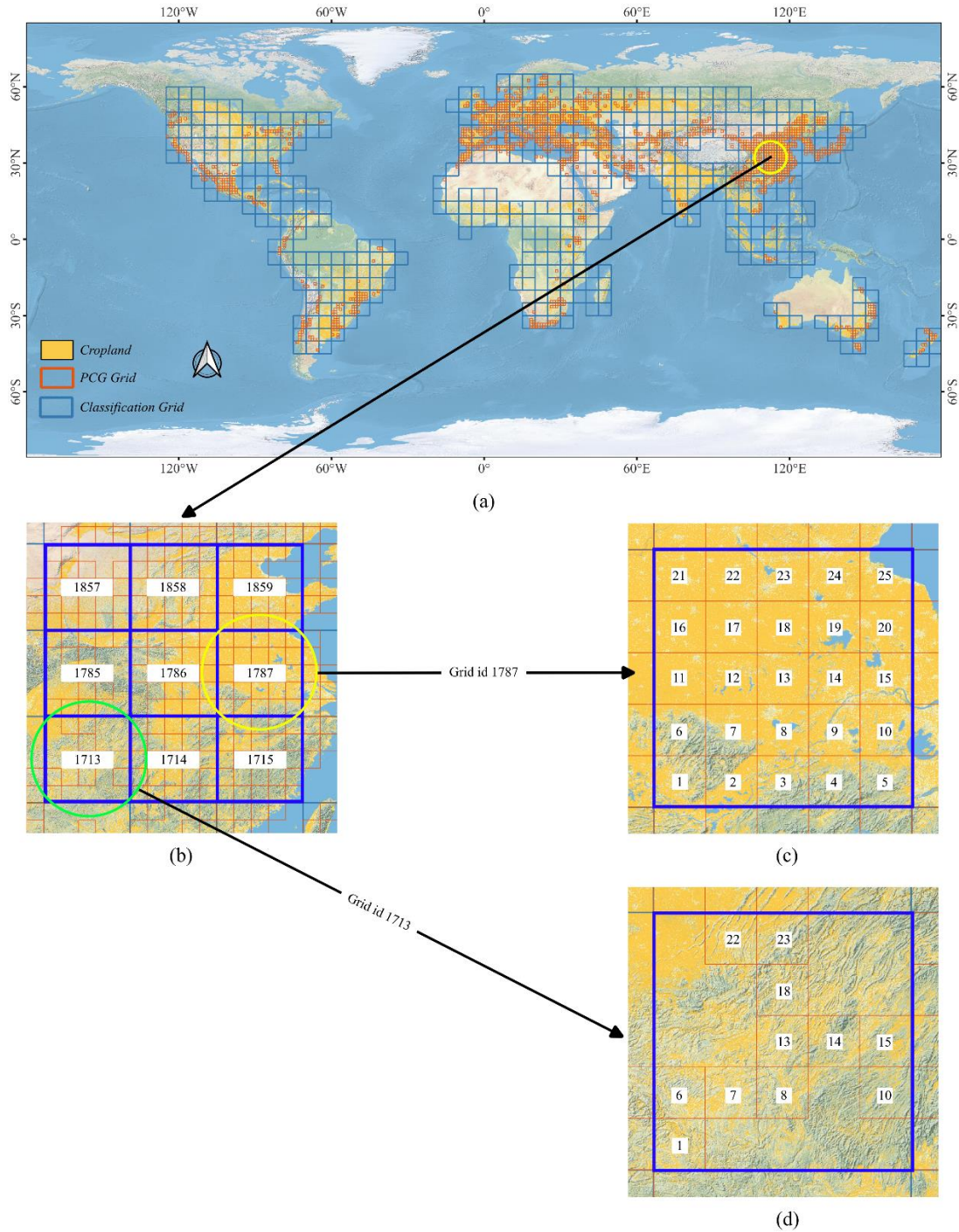
Figure. S1 Data Organization

The Global-PCG-10 dataset is compressed in *Global_PCG_10_Dataset.zip*. It contains 245 5°×5° grid files, and each of them is named using the grid's *'id'* attribute. Within each 5°×5° grid

file, there are 1°×1° TIF files, named in the format *gridID_subgridID_PCG_Result.tif*. Here, *gridID* represents the *'id'* of the 5°×5° grid containing the 1°×1° subgrid, and *subgridID* represents the *'id'* of the 1°×1° grid. Both the *Classification Grid* and the *PCG Grid* are provided in SHP format and compressed in *.zip* file. The *'id'* number of each Grid is contained in their property table. Additionally, the cropland and PCG area statistic data are contained in the Excel file, *SATA_Cropland&PCG.xlsx*.