

Change of soil carbon stocks during recent decades in typical regions of China during 1980s-2000s

XUEQI XIA¹ AND ZHONGFANG YANG¹

¹China University of Geosciences, Beijing 100083

Multi-purpose regional geochemical survey (MPRGS) in China, using a grid-sampling scheme with the density of 1 soil sampler/1km², and with the coverage of 147.17 km² up to the present, affords a suitable data base for detecting the change of soil organic carbon stocks. Soil organic carbon density (SOCD) calculated from MPRGS obtained from 2000s was compared with that from the second soil survey from 1980s, and then change of soil organic carbon stock was obtained for the typical regions of China. It was shown that there is a significant soil organic carbon loss in the Northeast Plain of China, However, the SOCD for the traditional farming area, e.g. the North China, East China, and Southwest China, increased significantly during the two decades. There is no clear variation of soil carbon stocks in the farming land of South China. The soil carbon loss of Northeast China was attributed both to the Climate Change and Landuse Change in the recent decades. And the increasing carbon stocks in the traditional farming land were caused by the improving agriculture management.