## Spatiotemporal Changes of Built-up Land Expansion and Carbon Emissions caused by the Chinese Construction Industry

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China is undergoing rapid urbanization, enlarging the construction industry, greatly generating substantial carbon emissions, both from energy consumption and terrestrial ecosystem. Early studies mainly focused on energy related carbon emissions for whole China, we still lack the carbon loss from terrestrial ecosystems, regional difference in time series. Thus, the present study attempts to fill in the knowledge gaps, with the following objectives: 1) Show the spatial distribution of built-up land expansion. 2) Find principal land-transfer types and calculate carbon storage loss. 3) Compare regional differences and changes in different years. 4) Find the major industrial sectors that determine indirect carbon emissions.

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