

EGU21-5838, updated on 03 Dec 2022

<https://doi.org/10.5194/egusphere-egu21-5838>

EGU General Assembly 2021

© Author(s) 2022. This work is distributed under the Creative Commons Attribution 4.0 License.



## China's Carbon Budget

**Piyu Ke**<sup>1</sup>, Zhu Liu<sup>1</sup>, Wei Li<sup>1</sup>, Xianghui Guo<sup>2</sup>, Minhan Dai<sup>2</sup>, Zhu Deng<sup>1</sup>, Biqing Zhu<sup>1</sup>, Rui Guo<sup>1</sup>, and Jianguang Tan<sup>1</sup>

<sup>1</sup>Tsinghua University, Department of Earth System Science, China (kpy20@mails.tsinghua.edu.cn)

<sup>2</sup>State Key Laboratory of Marine Environmental Science, Xiamen University, 361102 Xiamen, China

Combining updated methodology and data from different sources, we reported the estimates of China's carbon budget, including carbon sources from fossil fuel combustion and industrial process, and carbon sinks from terrestrial and marine systems. China's carbon budgets provide insights on the temporal and spatial distribution of the uptake of atmospheric carbon dioxide, and can be used to evaluate carbon cycle models and to define baselines for supporting China's climate policies and mitigation efforts. So far, we have found that terrestrial carbon sinks of China have increased significantly in the past 70 years with the development of afforestation projects in China. Seas of China have gradually transformed from carbon sources to carbon sinks.