**Retrieval of dominant methane (CH4) emission sources, the first high resolution(1-2m) dataset of storage tanks of China in 2000-2021**

**Short description**

Based on the GaoFen-1, GaoFen-2, GaoFen-6, and Ziyuan-3 satellites images in 2021, the authors extract storage tank result images in 92 typical Chinese cities and convert them to vector format. The vector with the detailed georeferenced inventory of these 14461 storage tanks is uploaded and presented here. It provides the information, such as the construction year and the unestablished year, of the storage tanks, which is retrieved during December 5th, 2023 to January 1st, 2024, by visual interpretation with reference to the historical high spatial resolution images from the Google Earth platform. At the same time, the dataset gives the area of each storage tank in square meters.

**Data availability**

These datasets are freely available and may be copied freely provided that the accompanying article is cited.

Fang Chen, Lei Wang, Yu Wang, Haiying Zhang, Ning Wang, Pengfei Ma, Bo Yu. Retrieval of dominant methane (CH4) emission sources, the first high resolution(1-2m) dataset of storage tanks of China in 2000-2021, Earth System Science Data, in prep, 2024.

**About the shapefile-formatted file of the dataset**

The dataset is created in ArcGIS 10.8.2 platform, and stored in the format of shapefile (.shp). The projected coordinate system it used is as follows:

Projected Coordinate System: Krasovsky\_1940\_Albers

Projection: Albers; False Easting: 0°; False Northing: 0°N; Central Meridian: 105°E;

Standard Parallel 1: 25°N; Standard Parallel 2: 47°N;

Latitude of Origin: 0°; Linear Unit: Meter

Geographic Coordinate System: GCS\_Krasovsky\_1940

Datum: D Krasovsky 1940; Prime Meridian: Greenwich; Angular Unit: Degree

In the attributes tables of the .shp files, the field, AreaOT\_m2, stands for the area of a storage tank in square meters; and the two fields, Year\_1 and Year\_2, represent the years of the unestablished year and the construction year of the storage tanks respectively.