#### Updates of CEEIO Database Version 3.1

Comparing with Version 3.0, CEEIO database Version 3.1 has been revised as follows:

1. The emissions of CH4 and N2O from agricultural production activities are added:

The emissions of CH4 and N2O from agricultural non-energy activities (such as rice cultivation, manure management and fertilizer application) in China from 1992 to 2018 (once every five years from 1992 to 2017) published by FAO (Food and Agriculture Organization of the United Nations) are added to *Crop cultivation* and *Livestock and livestock products* accordingly(FAOSTAT, 2021). Furthermore, we have compared the data from FAO with relevant researches to assure the reliability and transparency (Han et al., 2021; Luo et al., 2019; Shang et al., 2019; Sun et al., 2020; Wu et al., 2021; Yu et al., 2018; Yue et al., 2019; Zhang et al., 2011; Zhou et al., 2007) .

2. The CH4 fugitive emissions from coal, oil, and gas production are added:

Combining the energy mining data from China energy statistical yearbooks (NBS, 1993-2019) with the fugitive emissions coefficient published by IPCC (IPCC, 2006) and related literature (Sheng et al., 2021; Zhang et al., 2014), we have accounted the amount of CH4 leakage from coal mining, and oil and natural gas system from 1992 to 2018 (once every five years from 1992 to 2017).

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