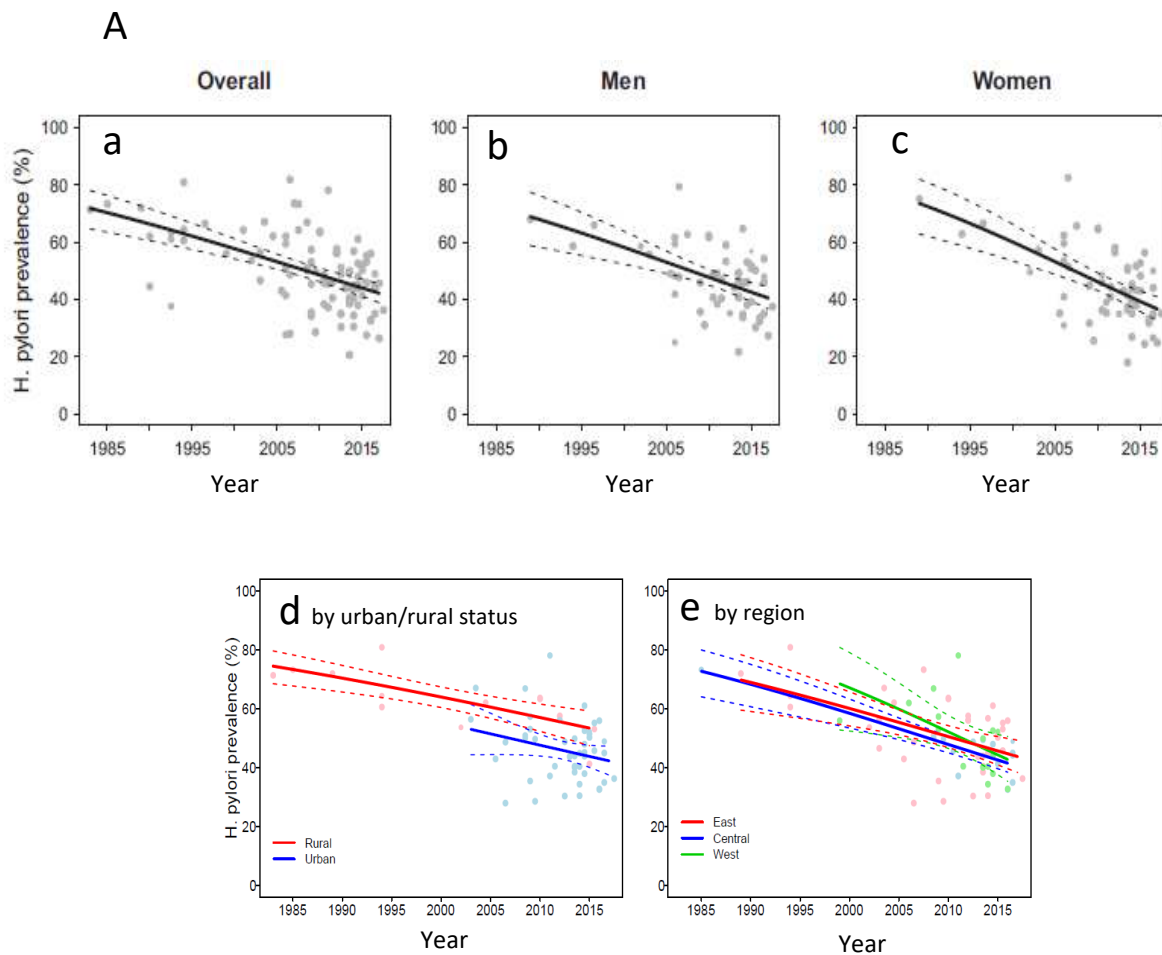


Supplementary Figures 1-5

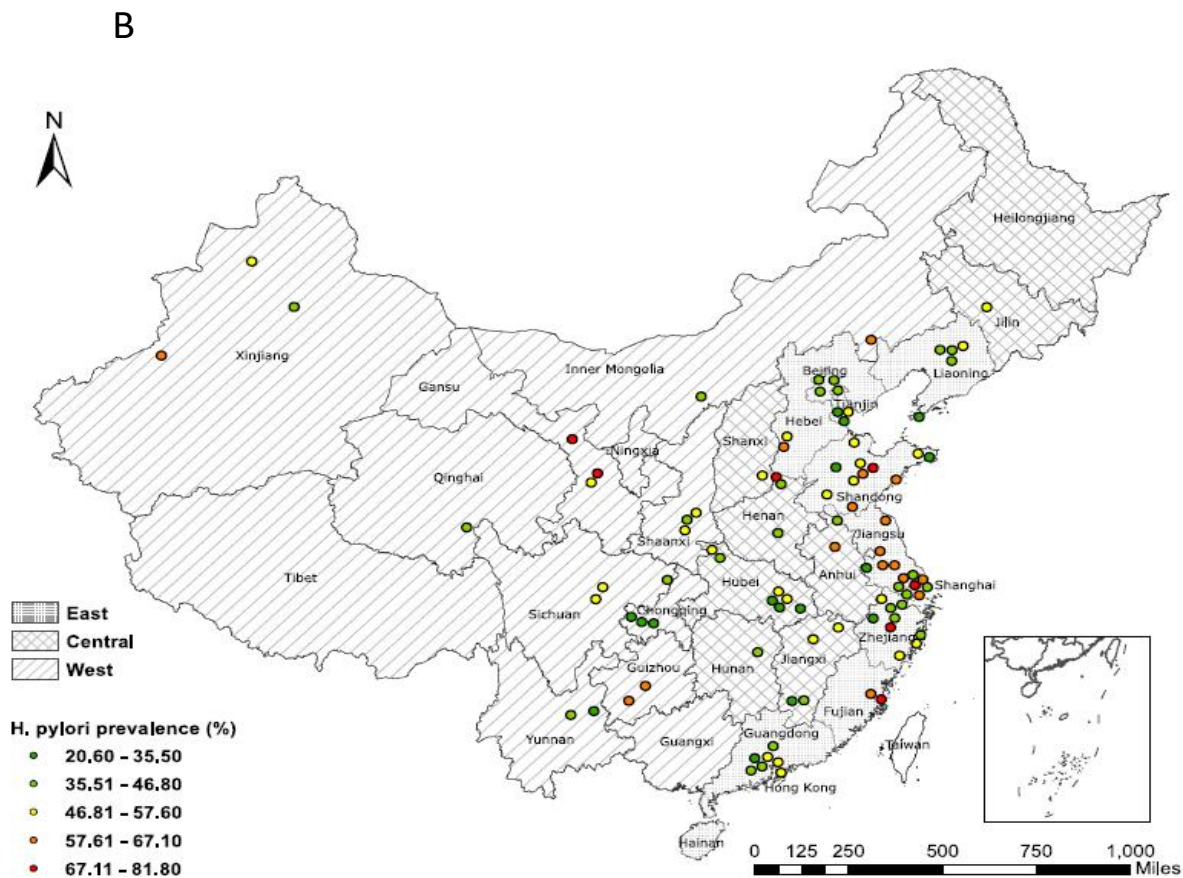
Trend and changes of *H. pylori* prevalence (Fig. 1), gastric cancer incidence and mortality (Fig. 2, 3), drinking water quality (Fig. 4) and social and family structure (Fig. 5) over the past 3-4 decades in mainland China

Supplementary Figure 1.



1 **Supplementary Figure 1.**

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Supplementary Figure 1. *H. pylori* prevalence in different year (A) and locations (B) in mainland China over the past 3-4 decades.

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9 *H. pylori* prevalence in different year and region of mainland China were investigated by meta-analyses from
 10 1983-2018⁶. The study included 98 publications from mainland China with estimated 670, 572 participants at
 11 different periods and locations. Data was collected and analyzed from 26 of the 31 provinces or regions of
 12 mainland China according to various study periods, urban/rural status, and region (east, central, and west) to
 13 investigate the infection status and time trend (A, a-e); the prevalence in each location of the included studies
 14 were also plotted on a map to visualize spatial distribution (B).

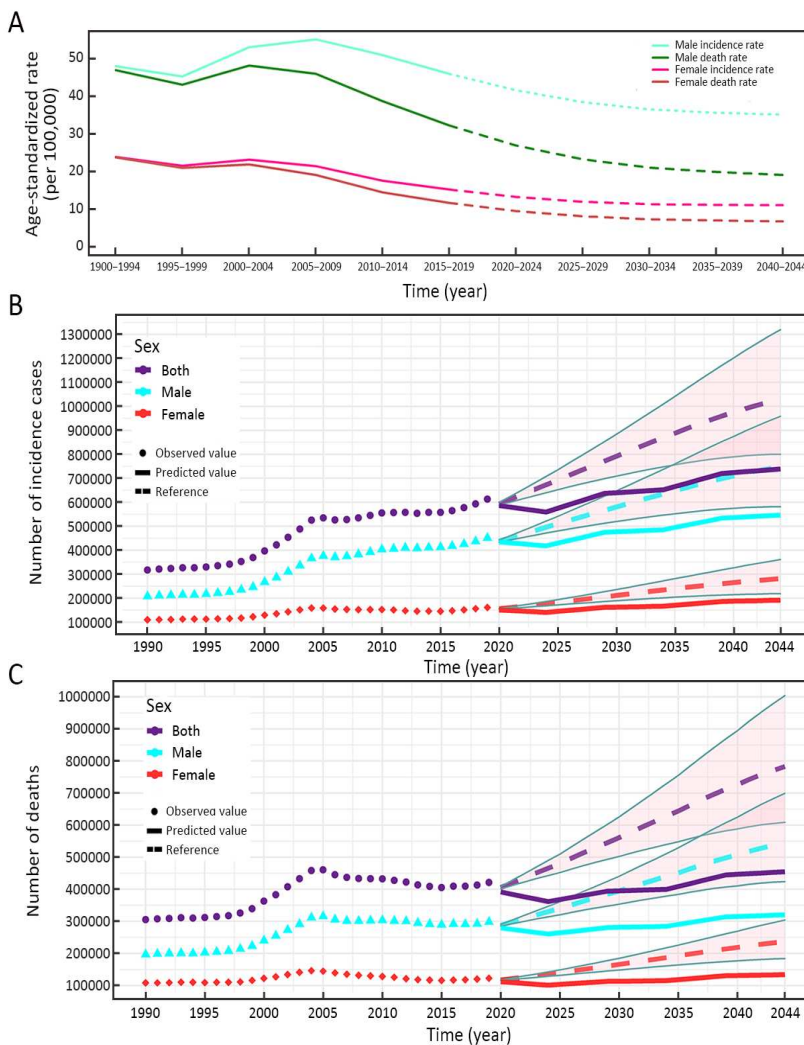
15

16 Cite with permission from reference #6: Li M, Sun Y, Yang J, et al. Time trends and other sources of variation in
 17 *Helicobacter pylori* infection in mainland China: A systematic review and meta-analysis. *Helicobacter*.
 18 2020;00:e12729. <https://doi.org/10.1111/hel.12729>

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1 **Supplementary Figure 2.**

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5 **Supplementary Figure 2. Temporal trends and forecasted rates of gastric cancer incidence and death in**
6 **mainland China from 1990-2044.**

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8 Temporal trends and forecasted rates of gastric cancer (GC) incidence and death were analyzed from 1990 to
9 2044 in mainland China⁷. The data on age-standardized rate (A), number of incidence cases (B), mortality (C) in
10 China from 1990 to 2019 were obtained from the Global Burden of Disease Study (2019). Solid lines and dash
11 lines represent the observed and the predicted number of incident cases and deaths of gastric cancer; shading
12 represents a 1% decrease and increase interval based on the 2019 rate.

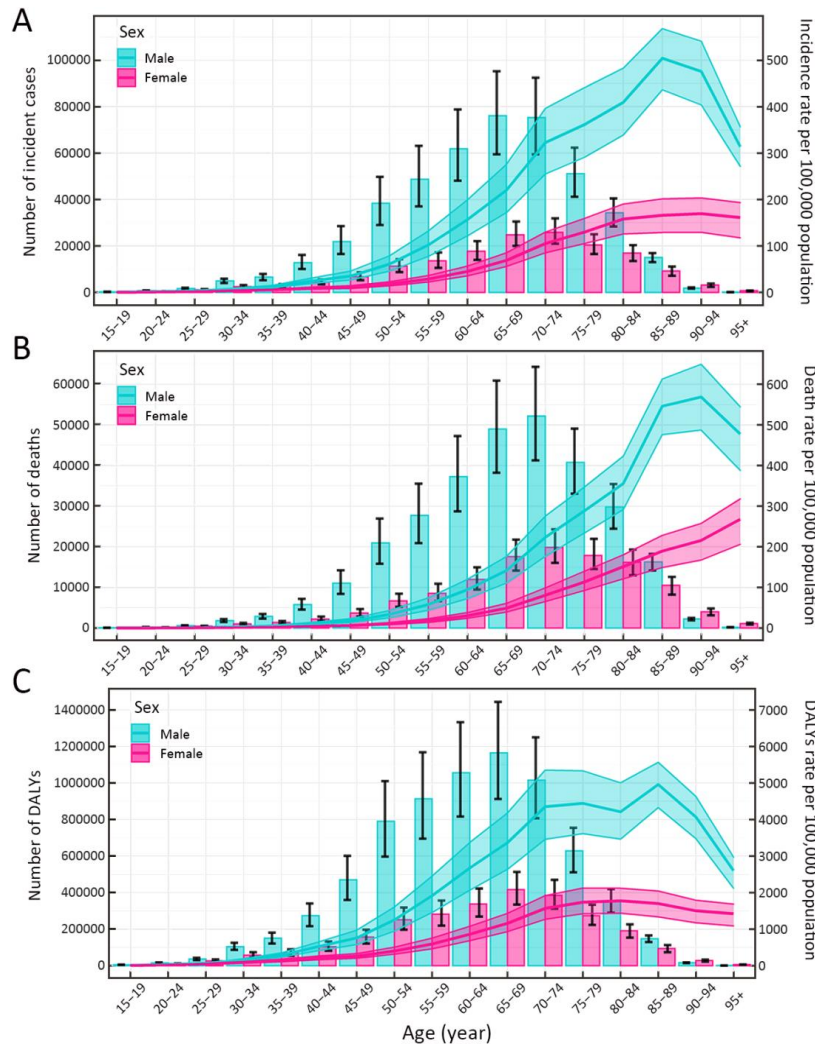
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14 Cite with permission from reference #7: Zhang T, Chen H, Yin X, He Q, Man J, Yang X, Lu M. Changing trends
15 of disease burden of gastric cancer in China from 1990 to 2019 and its predictions: Findings from Global Burden
16 of Disease Study. *Chin J Cancer Res* 2021;33(1):11-26. doi: 10.21147/j.issn.1000-9604.2021.01.02

1 **Supplementary Figure 3.**

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6 **Supplementary Figure 3. Gastric cancer incidence, death and disability-adjusted life-years by age and sex in 2019 in China.**

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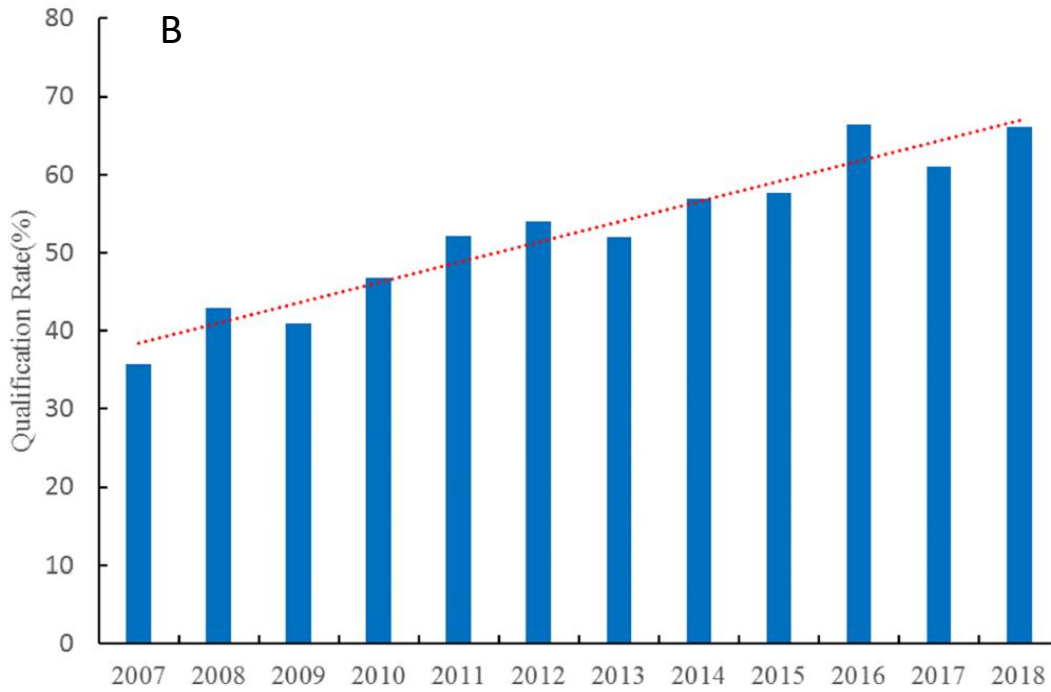
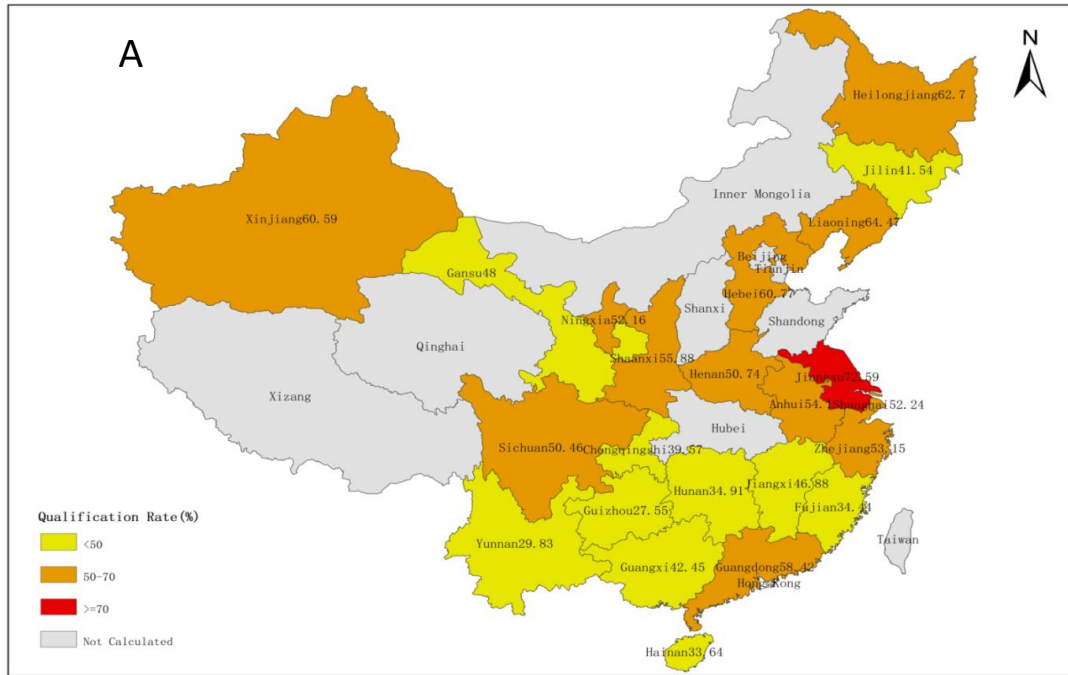
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Data of gastric cancer incidence (A), death (B) and disability-adjusted life-years (DALYs) (C) by age and sex in 2019 in China were collected and analyzed⁷. The data were obtained from the Global Burden of Disease Study (2019). Shading represents the upper and lower limits of the 95% uncertainty intervals (95% UIs).

Cite with permission from reference #7:

Zhang T, Chen H, Yin X, He Q, Man J, Yang X, Lu M. Changing trends of disease burden of gastric cancer in China from 1990 to 2019 and its predictions: Findings from Global Burden of Disease Study. *Chin J Cancer Res* 2021;33(1):11-26. doi: 10.21147/j.issn.1000-9604.2021.01.02

Supplementary Figure 4



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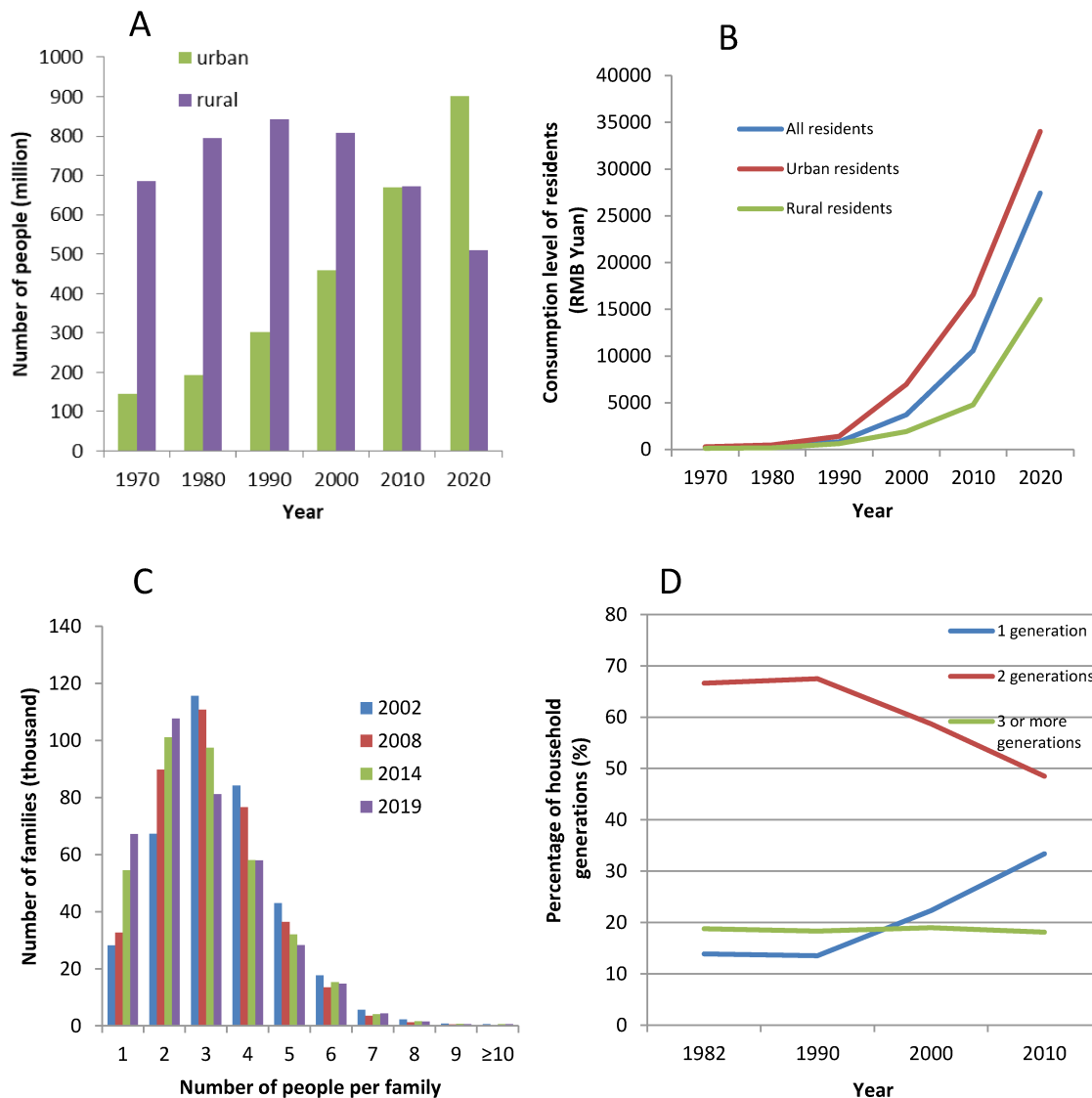
Supplementary Figure 4. Qualification rate of drinking water quality in China from 2007 to 2018.

The qualification rate of drinking water quality in mainland China from 2007 to 2018 was investigated by meta-analysis⁸, the study included 744 publications from 31 provinces and regions of mainland China. The investigation included a total of 680,265 water quality data in rural and urban area from 2007-2018, and covers four aspects of water sensory, general chemistry, toxicology and microbiology. Data are the average qualification rate of each province or region, the spatial distribution of China's drinking water quality was mapped (A); and the gradual improvement of average drinking water qualification rate from 2007 to 2018 is indicated (B).

Cite with permission from reference #8: *T. Wang, D. Sun, Q. Zhang, et al., China's drinking water sanitation from 2007 to 2018: A systematic review, Science of the Total Environment 2021;757:143923.*
<https://doi.org/10.1016/j.scitotenv.2020.143923>

1 **Supplementary Figure 5.**

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Supplementary Figure 5. Social and family structure changes in mainland China over the past 3-4 decades.

Data for social and family structure changes in mainland China over the past 3-4 decades were extracted and analyzed from online China Statistical Yearbook 2000 and National Bureau of Statistics of China database (<http://www.stats.gov.cn>). The data include urban and rural resident population change or urbanization (A), trend of consuming level of urban and rural residents (B), family structure changes toward smaller size (C, data are 1% ratio of national total household), and average generation changes within the household (D).