



Supplement of

Improved maps of surface water bodies, large dams, reservoirs, and lakes in China

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Fig. S1. Types of dams/reservoirs in this study. (a-b) On-stream dam/reservoir constructed on a river/stream regardless of impoundment; (c-d) Off-stream dam/reservoir formed by partial or complete embankment around an off-stream lake. The high-resolution images in this figure were from the Google Earth Pro (© Google Earth Pro 2019).

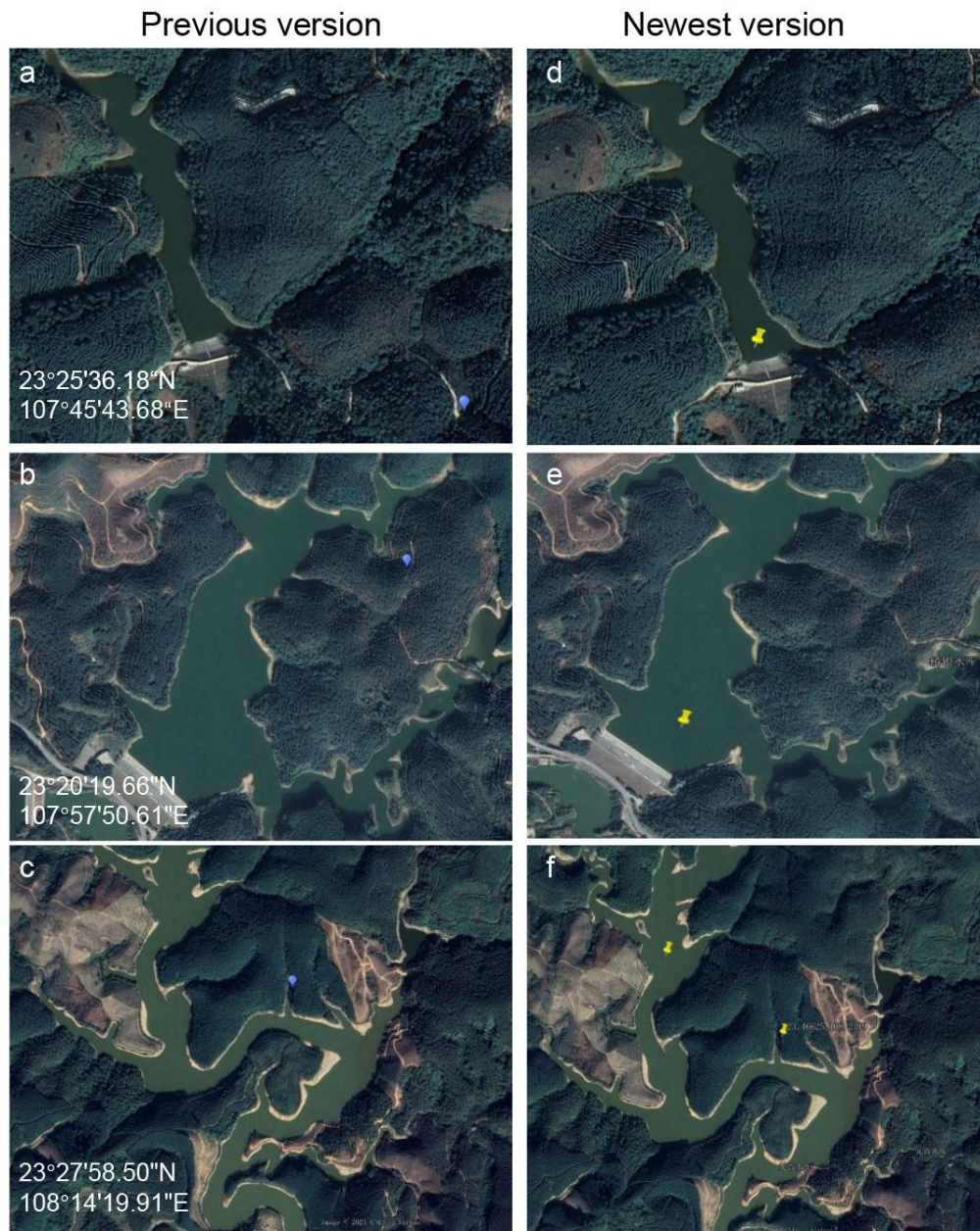


Fig. S2. Georeferenced coordinate offsets of dams from the GeoDAR within high-resolution images (© Google Earth Pro 2019).

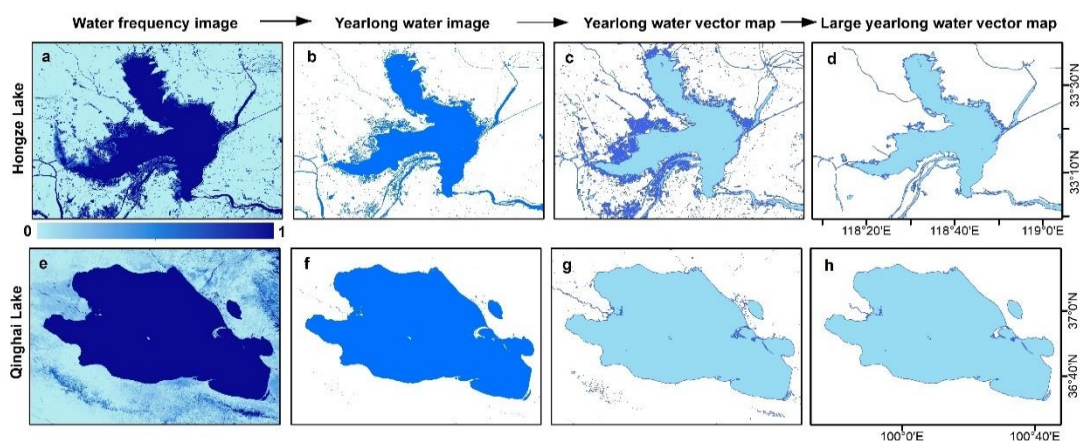


Fig. S3. The schematic diagram of generating the lake or reservoir polygons from water frequency map in the Hongze Lake of Jiangsu Province (a-d) and Qinghai Lake of Qinghai Province (e-h).

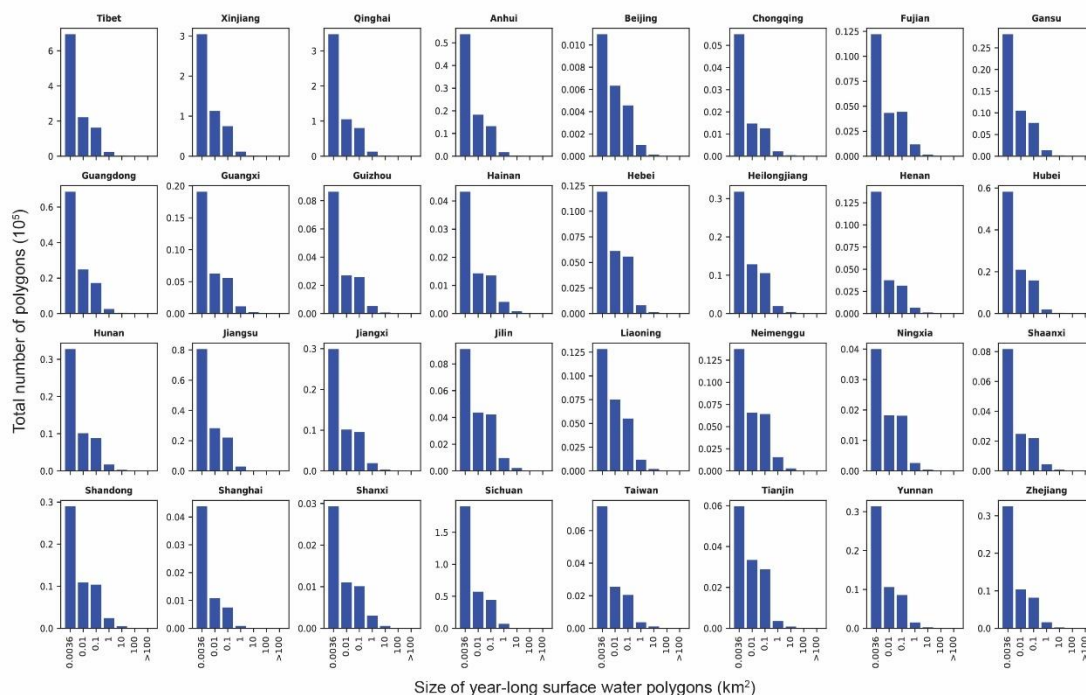


Fig. S4. Polygons numbers at different size by province in China.

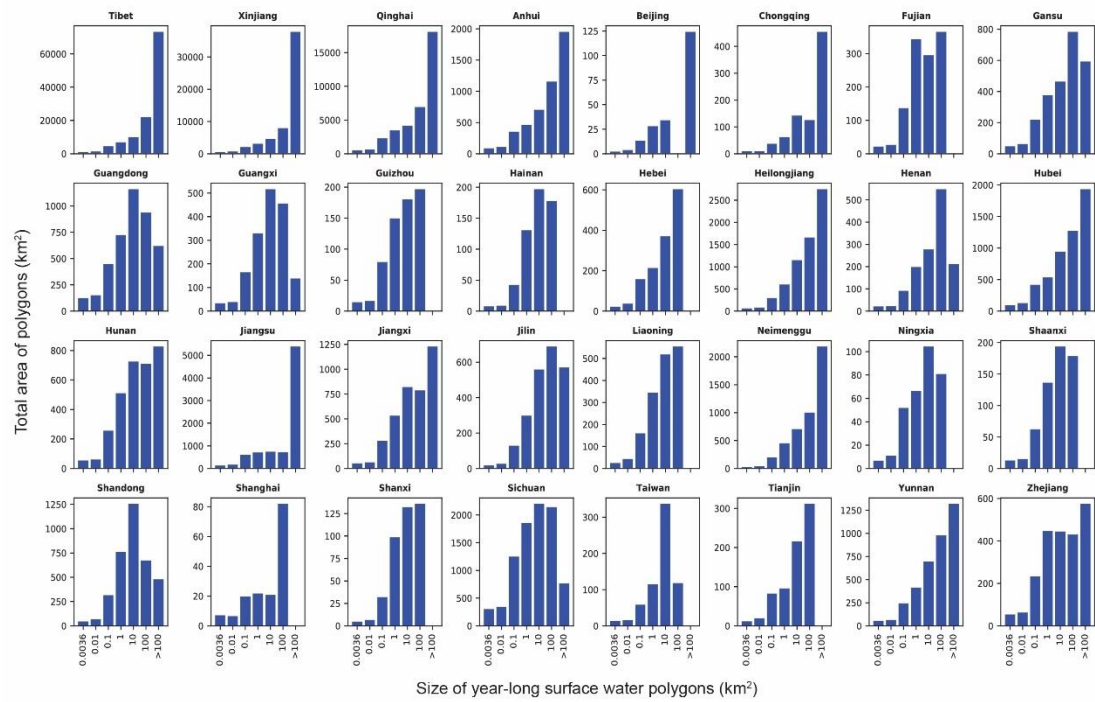


Fig. S5. Polygons areas at different size by province in China.

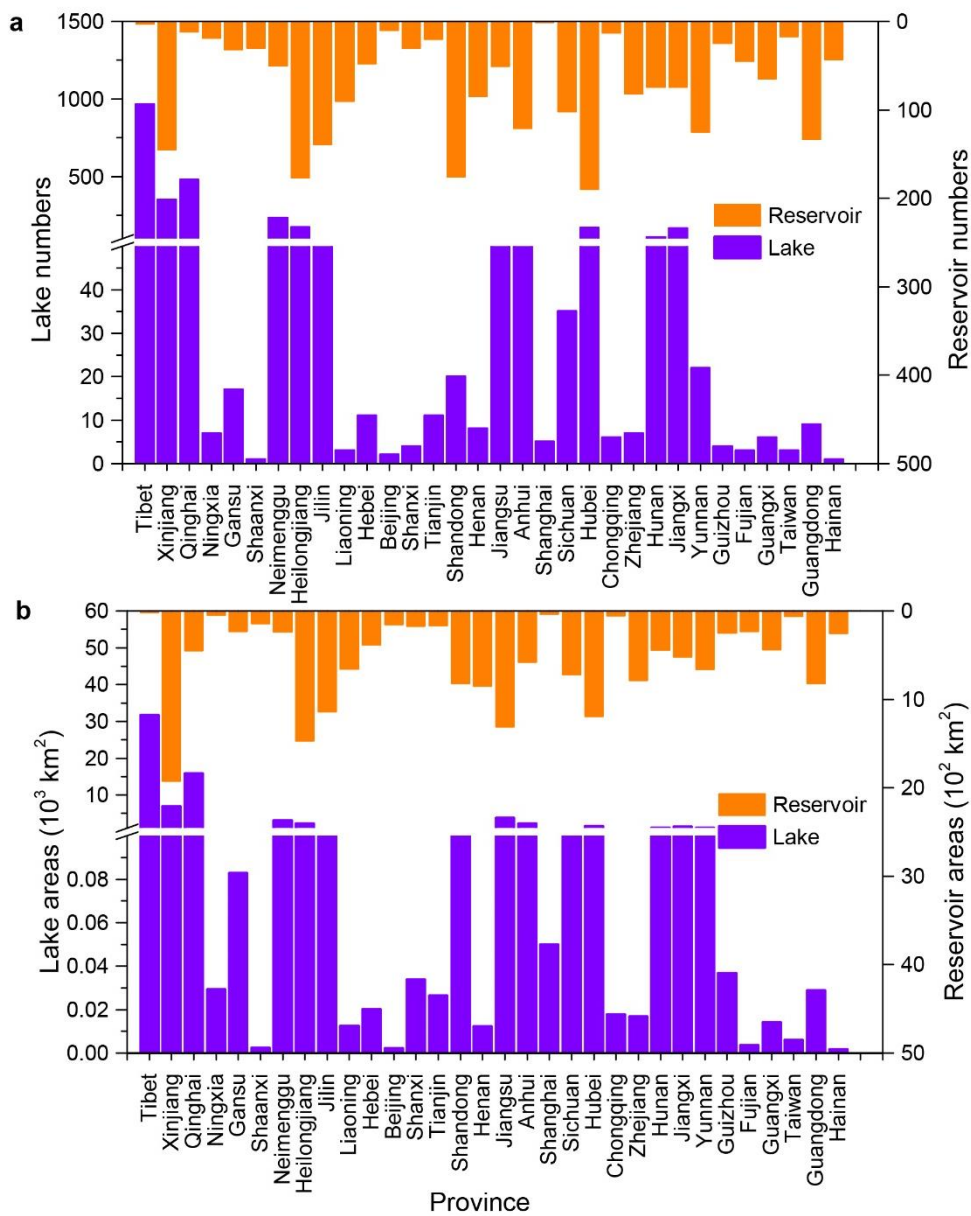


Fig. S6. Numbers and areas of lakes and reservoirs for 2019 in each province. a, Numbers of lakes and reservoirs; b, Areas of lakes and reservoirs.

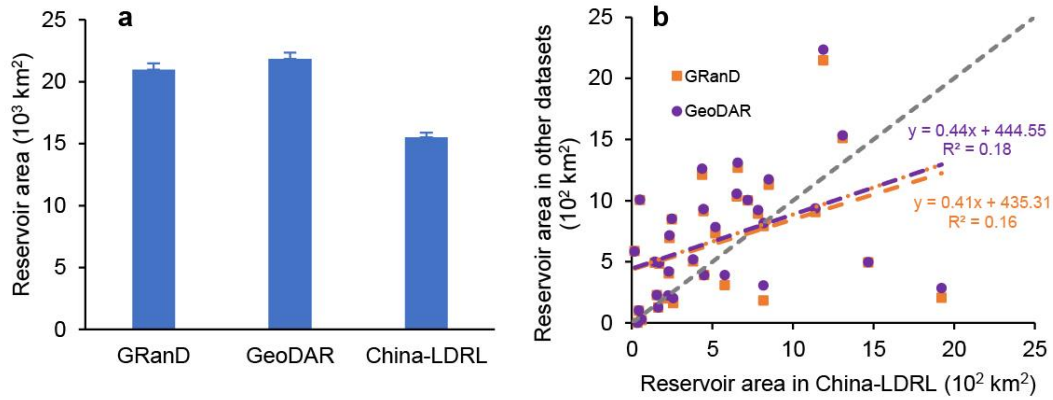


Fig. S7. Areas (a) and relationships (b) of large reservoir (with area $> 1 \text{ km}^2$) from the GRand, GeoDAR, and our China-LDRL datasets.

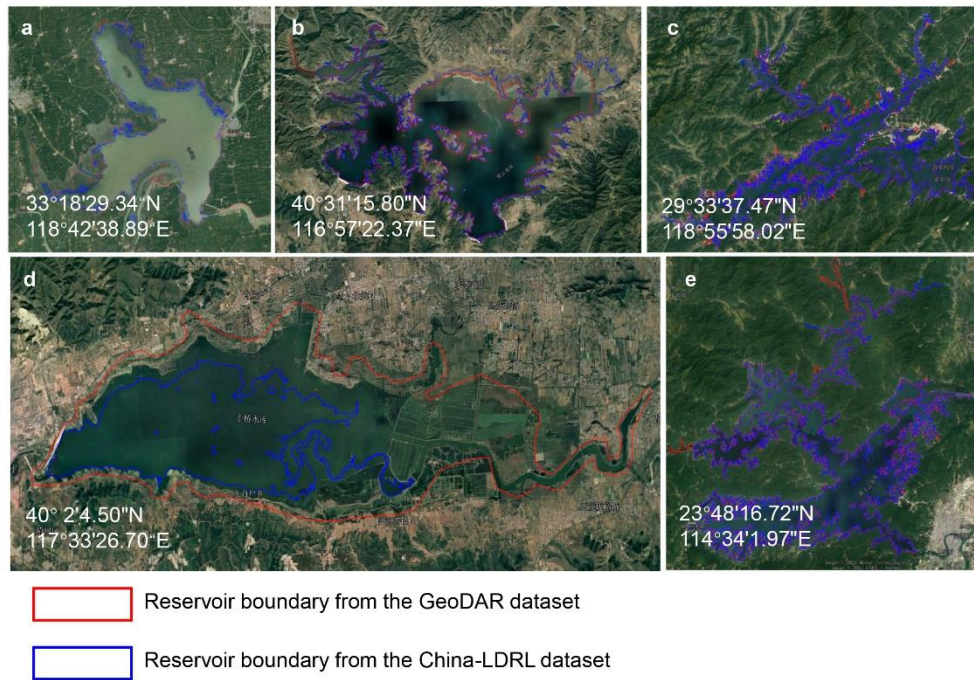


Fig. S8. Reservoirs from the GeoDAR and China-LDRL datasets within high-resolution images (© Google Earth Pro 2019). (a) The Hongze Lake (洪泽湖) in Jiangsu Province which was identified as reservoir in the GeoDAR dataset. (b) Miyun Reservoir (密云水库) in Beijing. (c) Xinanjiang Reservoir (新安江水库) in Zhejiang Province. (d) Yuqiao Reservoir (于桥水库) in Tianjin. (e) Xinfengjiang Reservoir (新丰江水库) in Guangdong Province.

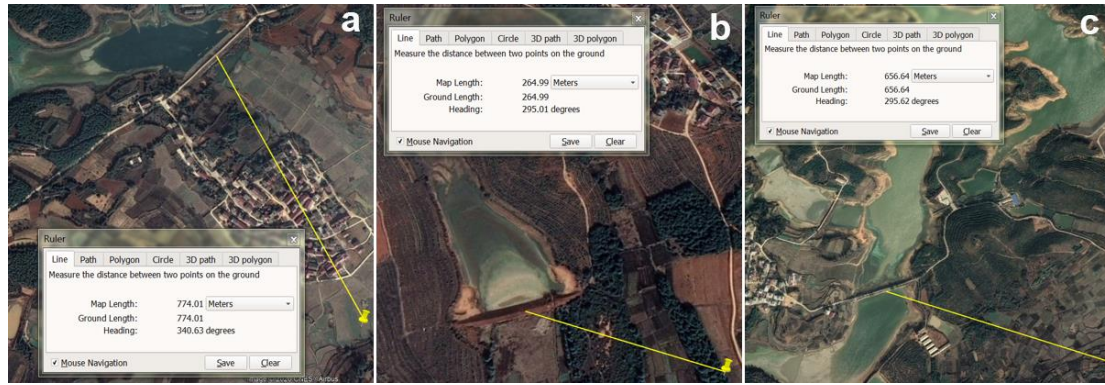


Fig. S9. Location offsets of dams from the GOODD dataset within high-resolution images (© Google Earth Pro 2019).

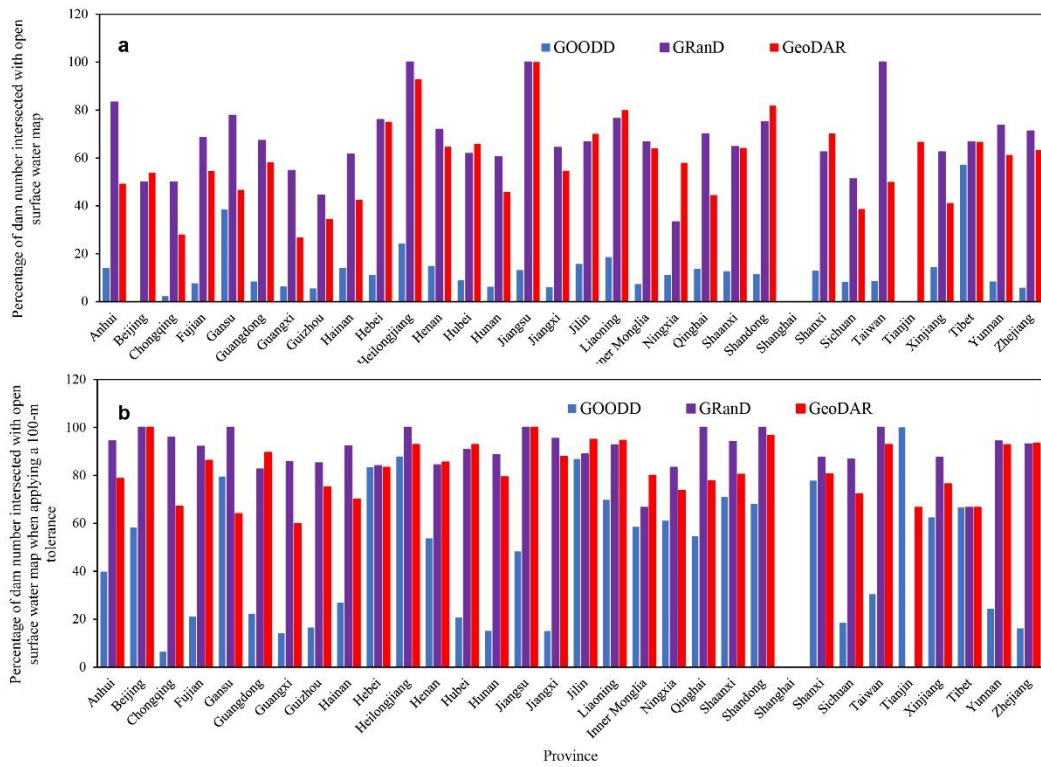


Fig. S10. Numbers of dams intersected with surface water body (SWB) map in China for 2019 by province. (a) Percentage of numbers of dams intersected with SWB map; (b) Percentage of numbers of dams intersected with SWB map when applying a 100-m tolerance.

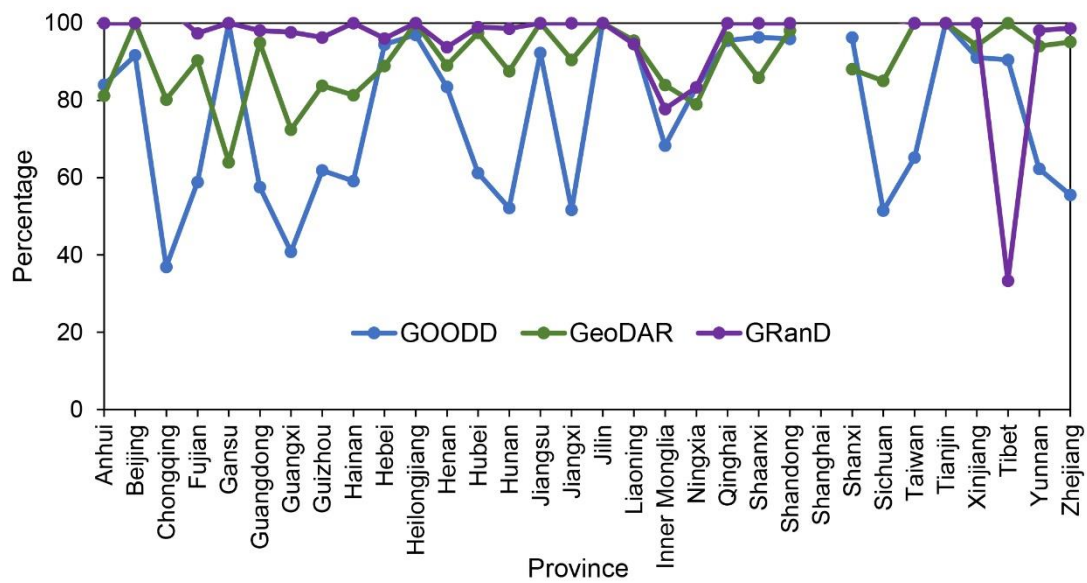


Fig. S11. Percentage of numbers of dams intersected with the surface water body map in China for 2019 when applying a 500-m tolerance.