

**Mapping 20 years of irrigated croplands in China using MODIS and statistics and existing irrigation products**

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**Fig. S1.** Statistical data from multiple levels for mainland China.

**Table S1.** Input datasets and cropland masks used for each year. The temporal resolution of CCI-LC and MlrAD-GI are yearly, and all other datasets have specific benchmark years. NLCD: National Land Cover Dataset of China, CCI-LC: Climate Change Initiative Land Cover, GLC\_FCS: Global Land-Cover product with Fine Classification System, GRIPC: Global Rain-fed, Irrigated and Paddy Croplands, IAAA: Irrigated Area Map for Asia and Africa, GMIA-m: the updated version of Global Map of Irrigated Areas from Meier et al., (2018), GFSAD: Global Food Security-support Analysis Data, Xiang2016: Xiang’s irrigation map for China in 2016, MlrAD-GI: MOIDS Irrigated Area Dataset generated by Greenness Index. Mask indicates the cropland mask. CP denotes Cropland.

| Year | A        | B      | C        | D           | E         | Mask   |
|------|----------|--------|----------|-------------|-----------|--------|
| 2000 | NLCD2000 | CCI-LC | MlrAD-GI | IAAA2000    | GMIA-m    | CP2000 |
| 2001 | NLCD2000 | CCI-LC | MlrAD-GI | IAAA2000    | GMIA-m    | CP2000 |
| 2002 | NLCD2000 | CCI-LC | MlrAD-GI | IAAA2000    | GMIA-m    | CP2000 |
| 2003 | NLCD2005 | CCI-LC | MlrAD-GI | GRIPC       | GMIA-m    | CP2005 |
| 2004 | NLCD2005 | CCI-LC | MlrAD-GI | GRIPC       | GMIA-m    | CP2005 |
| 2005 | NLCD2005 | CCI-LC | MlrAD-GI | GRIPC       | GMIA-m    | CP2005 |
| 2006 | NLCD2005 | CCI-LC | MlrAD-GI | GRIPC       | GMIA-m    | CP2005 |
| 2007 | NLCD2005 | CCI-LC | MlrAD-GI | GRIPC       | GMIA-m    | CP2005 |
| 2008 | NLCD2010 | CCI-LC | MlrAD-GI | IAAA        | GMIA-m    | CP2010 |
| 2009 | NLCD2010 | CCI-LC | MlrAD-GI | IAAA2010    | GFSAD     | CP2010 |
| 2010 | NLCD2010 | CCI-LC | MlrAD-GI | IAAA2010    | GFSAD     | CP2010 |
| 2011 | NLCD2010 | CCI-LC | MlrAD-GI | IAAA2010    | GFSAD     | CP2010 |
| 2012 | NLCD2010 | CCI-LC | MlrAD-GI | IAAA2010    | GFSAD     | CP2010 |
| 2013 | NLCD2015 | CCI-LC | MlrAD-GI | IAAA2010    | GFSAD     | CP2015 |
| 2014 | NLCD2015 | CCI-LC | MlrAD-GI | GLC_FCS2015 | Xiang2016 | CP2015 |
| 2015 | NLCD2015 | CCI-LC | MlrAD-GI | GLC_FCS2015 | Xiang2016 | CP2015 |
| 2016 | NLCD2015 | CCI-LC | MlrAD-GI | GLC_FCS2015 | Xiang2016 | CP2015 |
| 2017 | NLCD2018 | CCI-LC | MlrAD-GI | GLC_FCS2015 | Xiang2016 | CP2018 |
| 2018 | NLCD2018 | CCI-LC | MlrAD-GI | GLC_FCS2020 | Xiang2016 | CP2018 |
| 2019 | NLCD2018 | CCI-LC | MlrAD-GI | GLC_FCS2020 | Xiang2016 | CP2018 |