This data is the basic data used in the manuscript numbered "PONE-D-24-52370", which is a dataset from the real-time data dissemination system for automatic surface water quality monitoring in China.We collected data from three stations, namely Zongguan, Tuogang Bridge and Liangjianggou.Their latitude and longitude are (114.222569, 30.583363), (105.452907, 28.90166) and (104.625061, 28.780755), respectively.The dataset included the following elements: water temperature (°C), pH, dissolved oxygen (mg/L), permanganate index (mg/L), ammonia nitrogen (mg/L); total phosphorus (mg/L).Total Nitrogen (mg/L): Conductivity (μS/cm); Turbidity (NTU); Dew Point Temperature (℃); Humidity (%); Wind Speed (m/S); Wind Speed Level; Wind Direction Angle (degrees); Air Pressure (hpa); Visibility (km); Current Hourly Precipitation (mm).Time span: 2021/1/1 0:00:00-2024/6/30 20:00:00.