The climate data were collected from the well-known Climatic Research Unit (CRU) database.

The datasets have a 0.5° 0.5° resolution. I downloaded the climate data that cover the period 1901-2016 and chose the subset period of 1987-2016 (30 years). The datasets have monthly temperature and monthly precipitation variables among other climate variables.

I calculated the mean of the monthly temperature and the mean of the monthly temperature for each coordinate in the period between the year 1987 and 2016. Then I used the obtained mean temperature and mean precipitation in the coordinate that is closest to the Chinese wastewater treatment plants’ (WWTP) coordinate as the climate variables. The closest coordinate was found by identifying the coordinate in the CRU dataset that has the minimum difference with the WWTP’s coordinate.

When I compared the precipitation variable with another dataset (on the provincial level in China) from China Meteorological Administration (CMA), I found that there is about ten times difference between the precipitation values in two datasets even though both datasets state that the precipitation units are “mm”. I did some search, and I think that the ten times one is correct. Therefore I multiplied the calculated mean precipitation based on CRU dataset with a scalar of 10. And now the mean precipitation variable’s values are consistent with the other dataset. I did not use the other dataset from CMA because it only has the provincial level climate data.

Due to the time limitation, I did not manage to find out why the precipitation in CRU dataset is only about one-tenth of the other dataset. I will check it later. But for the time being, I think Ami can use these data to evaluate the effects of the climate on the influent water quality and cost of treatment. Once I found the reason, it should be easy to update the results (or explain the treatment of the CRU datasets).

Since I didn’t have enough time, Yuan helped me with the entry of the coordinate of the WWTP. The coordinate of the WWTP was found by entering the address in the website <http://www.gpsspg.com/maps.htm>.

Climate datasets reference:

University of East Anglia Climatic Research Unit; Harris, I.C.; Jones, P.D. (2017): CRU TS4.01: Climatic Research Unit (CRU) Time-Series (TS) version 4.01 of high-resolution gridded data of month-by-month variation in climate (Jan. 1901- Dec. 2016). Centre for Environmental Data Analysis, *04 December 2017*. doi:10.5285/58a8802721c94c66ae45c3baa4d814d0. <http://dx.doi.org/10.5285/58a8802721c94c66ae45c3baa4d814d0>

Inverse distance weighting: using a radius of 0.5 Euclidean distance.