

plate number ends in an odd or even number so as to reduce vehicle emissions, in order to fight against the smog.

So what degree does the policy influence the air quantity on neighborhood in dense urban? T-junction area of Linda North road and Shuangqing Road was taken as an example here. It is a residence-working mixed area, with busy traffic but no factory. Based on traffic data gained from videoing and counting and air pollution (containing NO, NO<sub>2</sub>, NO<sub>x</sub>, SO<sub>2</sub>, CO, O<sub>3</sub>, PM<sub>2.5</sub>) concentration data on Monday (the first working day, rush hour day), Wednesday (the middle working day, traffic flat hump day), Saturday (weekend) from December 19, 2016 to December 31, 2016, Then the influence of this policy on traffic pollution is qualified and its impact on air quality at neighborhood scale is tested.

## 2. Data

A flux tower (BJU-BJ), settled at 116.337° E, 40.007° N, was used to collect the per half-hour air pollution concentration data, containing NO, NO<sub>2</sub>, NO<sub>x</sub>, SO<sub>2</sub>, CO, O<sub>3</sub>, PM<sub>2.5</sub>. Main observation equipment are closed type carbon dioxide/moisture analyzer (Campbell, companies in the United States), CSAT3 three dimensional ultrasonic anemometer on Monday (the first working day, rush hour day), Wednesday (the middle working day, traffic flat hump day), Saturday (weekend, traffic flat hump day).

## 3. Empirical Research and Result

The result show that (Figure 1), the red alter for heavy air pollution policy caused all of the air pollution presenting decline trend at different level. And we can infer that the policy do have a positive impact on air quantity improvement at the neighborhood scale in dense urban. And after several days of the red alter for heavy air pollution policy, the air pollution concentration level presented an increase trend, which means the air pollutions produced by daily operation of the neighborhood is out of the air self cleaning capacity.

Compared with other air pollutions, the PM<sub>2.5</sub> concentration is more sensitive to the traffic control but presents a time lagging effect. Because other air pollutions have more dramatic decrease during the policy implementation. Nitric oxide reaction to the policy is more immediate and sensitive than CO and O<sub>3</sub>.

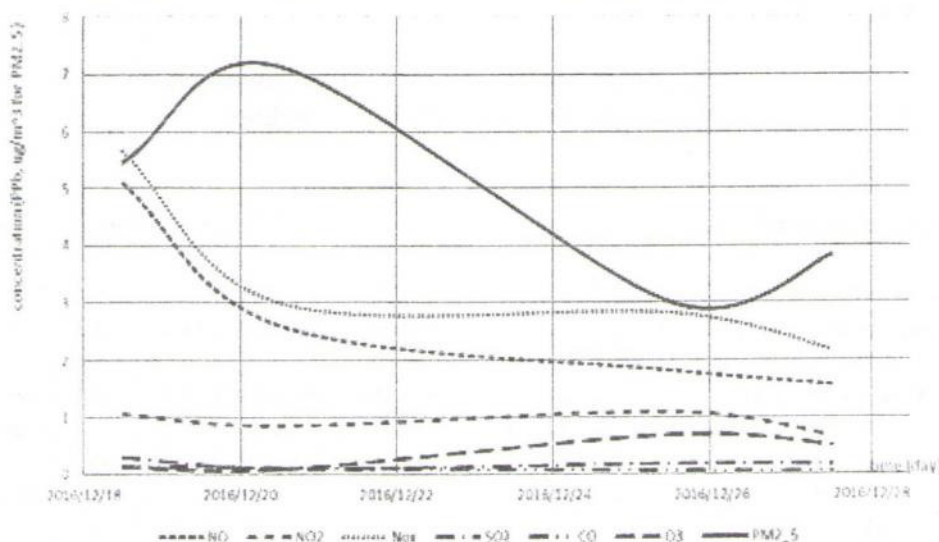


Figure 1. The air pollution concentration variation trend

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## THE EFFECTS OF MINING ON HUMAN SETTLEMENTS

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*Abstract.* Mongolian socio-economic development is linked inseparably to manufacturing, mining and quarrying sectors and defined as the leading economic sector under the industrial policy focusing on exports. Increasing number of em-

employees in mining and quarrying sectors along with the output growth means that those sectors are the main factors effecting populations and their settlements as well as the effect on human settlements is different for each province in accordance with mineral deposit and mining capacity.

This paper aims to rank 21 provinces based on the number of mining companies operating in territory of each province, deposit reserves, significance and volume of production and release the relationship estimating changes of ranking, population, labor force, percentage of employees and migration from 2010 to 2015.

The populations of provinces with deposits of strategic importance have raised, but the high proportion of migrants integrates the strong mechanical growth for population. Although population, settlement and employment in the main mining areas have increased in result of the mining and quarrying sectors, it is expected to create the shortage of jobs for provinces with the high growth of population.

*Key words:* mining, population, labor force, migration.